Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1611bxv

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

```
* * * * * * * * * *
                     Welcome to STN International
NEWS
                 Web Page for STN Seminar Schedule - N. America
NEWS
         APR 04
                 STN AnaVist, Version 1, to be discontinued
NEWS
         APR 15
                 WPIDS, WPINDEX, and WPIX enhanced with new
                 predefined hit display formats
         APR 28
NEWS
                 EMBASE Controlled Term thesaurus enhanced
NEWS
     5
         APR 28
                 IMSRESEARCH reloaded with enhancements
NEWS 6 MAY 30
                 INPAFAMDB now available on STN for patent family
                 searching
                 DGENE, PCTGEN, and USGENE enhanced with new homology
NEWS 7 MAY 30
                 sequence search option
NEWS 8 JUN 06
                 EPFULL enhanced with 260,000 English abstracts
NEWS
     9
         JUN 06
                 KOREAPAT updated with 41,000 documents
NEWS 10
         JUN 13 USPATFULL and USPAT2 updated with 11-character
                 patent numbers for U.S. applications
         JUN 19
NEWS 11
                 CAS REGISTRY includes selected substances from
                 web-based collections
NEWS 12
         JUN 25
                 CA/CAplus and USPAT databases updated with IPC
                 reclassification data
NEWS 13
         JUN 30
                 AEROSPACE enhanced with more than 1 million U.S.
                 patent records
NEWS 14
         JUN 30
                 EMBASE, EMBAL, and LEMBASE updated with additional
                 options to display authors and affiliated
                 organizations
NEWS 15
         JUN 30 STN on the Web enhanced with new STN AnaVist
                 Assistant and BLAST plug-in
NEWS 16
         JUN 30 STN AnaVist enhanced with database content from EPFULL
NEWS 17
         JUL 28 CA/CAplus patent coverage enhanced
NEWS 18 JUL 28 EPFULL enhanced with additional legal status
                 information from the epoline Register
NEWS 19
         JUL 28 IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS 20
         JUL 28 STN Viewer performance improved
NEWS 21
         AUG 01
                 INPADOCDB and INPAFAMDB coverage enhanced
NEWS 22 AUG 13 CA/Caplus enhanced with printed Chemical Abstracts
                 page images from 1967-1998
NEWS 23
         AUG 15
                 CAOLD to be discontinued on December 31, 2008
NEWS 24
         AUG 15
                 CAplus currency for Korean patents enhanced
NEWS 25
                 CA/CAplus, CASREACT, and IFI and USPAT databases
         AUG 25
                 enhanced for more flexible patent number searching
NEWS 26
         AUG 27
                 CAS definition of basic patents expanded to ensure
                 comprehensive access to substance and sequence
                 information
```

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008. NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS LOGIN Welcome Banner and News Items

NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 03:48:35 ON 15 SEP 2008

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 03:48:50 ON 15 SEP 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Sep 2008 VOL 149 ISS 12 FILE LAST UPDATED: 14 Sep 2008 (20080914/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/legal/infopolicy.html

=> s rosuvastatin/prep

0 ROSUVASTATIN/CT

4636664 PREP/RL

L1 0 ROSUVASTATIN/PREP

(ROSUVASTATIN/CT (L) PREP/RL)

=> s rosuvastatin

L2 1158 ROSUVASTATIN

 \Rightarrow 12 and process

L2 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

 \Rightarrow s 12 and process

2678768 PROCESS

L3 118 L2 AND PROCESS

=> s rosuvastatin (1) process

1158 ROSUVASTATIN

2678768 PROCESS

L4 86 ROSUVASTATIN (L) PROCESS

 \Rightarrow d 14 , 1-86 bib abs

- L4 ANSWER 1 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2008:1083706 CAPLUS
- TI Rosuvastatin reduces intima-media thickness in hypercholesterolemic subjects with asymptomatic carotid artery disease: the Asymptomatic Carotid Atherosclerotic Disease in Manfredonia (ACADIM) Study
- AU Riccioni, Graziano; Bazzano, Lydia A.; Bucciarelli, Tonino; Mancini, Barbara; di Ilio, Emanuela; D'Orazio, Nicolantonio
- CS San Camillo de Lellis' Hospital, Cardiology Unit, Manfredonia, Foggia, Italy
- SO Expert Opinion on Pharmacotherapy (2008), 9(14), 2403-2408 CODEN: EOPHF7; ISSN: 1465-6566
- PB Informa Healthcare
- DT Journal
- LA English
- Background: An increase in carotid intima-media thickness (CIMT) AΒ represents an early phase of the atherosclerotic process. The aim of this study was to evaluate whether a reduction in CIMT could be seen with only 16 wk of treatment with rosuvastatin (10 mg/day). Methods/results: Sixty-six participants of the ACADIM Study with hypercholesterolemia and carotid atherosclerosis at baseline carotid ultrasound investigation (CUI) were examined, with repeat CUI after 16 wk of treatment. Demog. and lifestyle data were collected, as well as phys. examination and fasting venous blood samples. Total cholesterol, low d. lipoprotein cholesterol (LDL-C) and triglycerides decreased significantly (p < 0.0001), while high d. lipoprotein cholesterol (HDL-C) increased significantly (p < 0.0001) during the intervention. The mean decrease in IMT of the right and left common carotid arteries (CCAs) was 0.35 and 0.38 mm, resp. (p < 0.05 for each). Age and lipid profile parameters were significant predictors of change in CIMT in linear regression analyses after adjustment for established atherosclerosis risk factors. Conclusions: Treatment with rosuvastatin in adults with evidence of subclin. atherosclerosis significantly reduced the CIMT of both CCAs, as well as improving lipid and lipoprotein levels.

L4 ANSWER 2 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2008:974314 CAPLUS

DN 149:246327

 $\ensuremath{\mathsf{TI}}$. An improved process for preparation of rosuva statin calcium

IN Dandala, Ramesh; Mallela, Sambhu Prasad Sarma; Nandi, Sukumar; Nangi, Gangadhar Bhima Shankar; Buridipadu, Sunil Kumar; Meenakshisunderam, Sivakumaran

PA Aurobindo Pharma Limited, India

SO PCT Int. Appl., 40pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

FAN.CNT 1																		
	PAT	CENT 1	NO.			KIND DATE			APPLICATION NO.						DATE			
ΡI	WO	2008	 0962	 57		A1	A1 20080			,	——— WO 2	 008_	 IB29	 0		20	00802	204
		W:	ΑE,	AG,	AL,	AM,	AO,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
			CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
			FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,
			KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
			ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,
			PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ТJ,	TM,
			TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW			
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HR,	HU,
			IE,	IS,	ΙΤ,	LT,	LU,	LV,	MC,	MT,	NL,	NO,	PL,	PT,	RO,	SE,	SI,	SK,
			TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,
			ΤG,	BW,	GH,	GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,
			ΑM,	ΑZ,	BY,	KG,	KΖ,	MD,	RU,	ΤJ,	TM							
PRAI	IN	2007	-CH2	77		Α		2007	0208									
	ΙN	2007	-CH1	121		A		2007	0529									
GI																		

AB An improved process was disclosed for the preparation of rosuvastatin calcium I (R = 0-.1/2Ca2+). The process comprised a reaction sequence which included a reaction of EtOCOCH2CO2H with a derivative of pentenoic acid II [R1 = CH:CHCH(OSiMe2CMe3)CH2CO2H-(3S,4E)] using Et2Zn in toluene.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 3 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
```

2008:942954 CAPLUS AN

149:246325 DN

A method for the purification of rosuvastatin intermediate TI

INKumar, Upparapalli Sampath; Mannathan, Subramaniyan; Sabrinathan, Natarajan; Sivadas, Anand; Palanivel, Senthilnathan; Rao, Siripragada Mahender

Orchid Chemicals & Pharmaceuticals Ltd., India PA

PCT Int. Appl., 12pp. SO

CODEN: PIXXD2

DT Patent

LA English

FAN.	CNT	1																
	PAT	CENT 1	NO.			KIND DATE			APPLICATION NO.						DATE			
ΡI	WO 2008093205			A2	_	2008	0807		WO 2	 008-	 IB18:	 9		2	0080	 129		
		W:	ΑE,	AG,	AL,	AM,	AO,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
			CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
			FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,
			KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
			ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,
			PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,
			TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW			
		RW:	ΑT,	BE,	ВG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HR,	HU,
			ΙE,	IS,	ΙT,	LT,	LU,	LV,	MC,	MT,	NL,	NO,	PL,	PT,	RO,	SE,	SI,	SK,
			TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,
			ΤG,	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,
			AM,	ΑZ,	BY,	KG,	KΖ,	MD,	RU,	ТJ,	TM							
PRAI	IN	2007	-CH2	20		Α		2007	0131									
OS	CAS	SREAC'	T 14	9:24	6325													
GT																		

AΒ A process was disclosed for the preparation and purification of ester I [R = CH:CHCOCH2CH(OSiMe2CMe3)CH2CO2Me-(3R,6E)] which is a useful intermediate for the preparation of rosuvastatin (II) and its pharmaceutically acceptable salts. The process comprised a stereoselective olefination reaction of aldehyde I (R = CHO) with Ph3P:CHCOCH2CH(OSiMe2CMe3)CH2CO2Me-(3R) achieved by refluxing for 10 to 12 h in MeCN to give the desired intermediate ester with 100% yield and purity of 88-95%. The purification method comprised the addition of an aqueous organic

acid, such as acetic acid, under stirring conditions in presence of an

organic solvent, such as iso-Pr ether, or alternatively, the addition of aqueous

alc., such as methanol, under stirring conditions in presence of an organic solvent, such as iso-Pr ether.

L4 ANSWER 4 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2008:927637 CAPLUS

TI A process for preparing amorphous form of rosuvastatin

IN Patel, Dhimant Jasubhai; Vyas, Dipen Hasmukhray; Kumar, Rajiv; Dwivedi, Shriprakash Dhar

PA Cadila Healthcare Limited, India

SO Indian Pat. Appl., 44pp.

CODEN: INXXBQ

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	IN 2006MU01654	A	20080725	IN 2006-MU1654	20061006
PRAI	IN 2006-MU1654		20061006		

AB The present invention relates to crystalline rosuva statin tert – butylammonium salt.

```
L4 ANSWER 5 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
```

AN 2008:734545 CAPLUS

DN 149:79403

TI An improved process for preparing rosuvastatin calcium

IN Dandala, Ramesh; Mallela, Sambhu Prasad Sarma; Nandi, Sukumar; Nangi, Gangadhar Bhima Shankar; Buridipadu, Sunil Kumar; Meenakshisunderam, Sivakumaran

PA Aurobindo Pharma Limited, India

SO PCT Int. Appl., 27pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

FAN.	FAN.CNT I																	
	PATENT NO.					KIND DATE			APPLICATION NO.						DATE			
ΡI	WO	2008	0720	78		A1		2008	0619	,	WO 2	007-	 IB39:	 36		2	0071	211
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,	CA,
			CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,	FΙ,
			GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,
			KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,	ME,
			MG,	MK,	MN,	MW,	MX,	MY,	MΖ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,
			PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,
			TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW				
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,
			IS,	ΙΤ,	LT,	LU,	LV,	MC,	MT,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,
			ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG,	BW,
			GH,	GM,	ΚE,	LS,	MW,	MΖ,	ΝA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑM,	ΑZ,
			BY,	KG,	KΖ,	MD,	RU,	ТJ,	$_{ m TM}$									
PRAI	ΙN	2006	-CH2	308		A		2006	1213									
OS GI	CAS	SREAC'	T 14	9:79	403;	MAR:	PAT	149:	7940:	3								

AB A process was disclosed for the preparation of intermediates, such as I [R5 = CH:CHCH2OH-(E), CH:CHCHO-(E), CH:CHCO2H-(E), CH:CHCO2OMe-(E), CH:CHCO2CO2Me-(E)], of the therapeutically useful anticholesteremic agents rosuvastatin I [R5 = CH:CHCH(OH)CH2CH(OH)CH2CO2H-(3R,5S,6E)] and rosuvastatin calcium I [R5 = CH:CHCH(OH)CH2CH(OH)CH2CO2-.1/2Ca2+-(3R,5S,6E)].

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 6 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
ΑN
       2008:673569 CAPLUS
       149:32135
DN
       Process for the preparation of rosuvastatin
TI
IN
       Lenger, Steven Robert
PA
       Astrazeneca Uk Limited, UK
SO
       PCT Int. Appl., 44pp.
       CODEN: PIXXD2
DT
       Patent
LA
       English
FAN.CNT 1
       PATENT NO.
                                      KIND
                                                 DATE
                                                                   APPLICATION NO.
                                                                                                        DATE
                                                                   ______
                                      ____
                                                 _____
       WO 2008065410
                                      A1
                                                 20080605
                                                                  WO 2007-GB4590
PΙ
                                                                                                       20071130
             W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                    CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
                    GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             GB, GD, GE, GH, GM, GI, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BL, CE, CG, CT, CM, CA, CN, CO, CM, ML, MP, NE, SN, TD, TG, PM
                    BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                    BY, KG, KZ, MD, RU, TJ, TM
       US 20080188657
                                  A1 20080807
                                                                   US 2007-948615
                                                                                                        20071130
PRAI US 2006-868111P
                                       Ρ
                                                 20061201
       MARPAT 149:32135
OS
GΙ
```

AB A process was disclosed for the asym. synthesis of the therapeutically useful anticholesterolemic rosuvastatin I [R = CO2H, R3b = OH, R3a = H] and rosuvastatin calcium I [R = CO2-.1/2Ca2+, R3b = OH, R3a = H] via preparation of an intermediate ketone I [R = CO2Et, R3aR3b = O] employing a stereoselective aldol reaction.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 7 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN L4

ΑN 2008:673151 CAPLUS

149:32133 DN

Process for the preparation and purification of the cholesterol TIlowering agent rosuvastatin via the formation of rosuvastatin dehydroabietylamine salt

Bollikonda, Satyanarayana; Chaganti, Sridhar; Tamma, Ranga Reddy; Dommati, ΙN Loka Maheshwari Pochaiah

Dr. Reddy's Laboratories Ltd., India; Dr. Reddy's Laboratories, Inc. PΑ

PCT Int. Appl., 22pp. SO

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1																		
	PA:	TENT :	NO.			KIND		DATE			APPLICATION NO.					DATE		
ΡI	WO	2008	 0674	40		A2	2 20080605				WO 2007-US85888					2	0071	 129
	WO	2008	0674	40		А3		2008	0717									
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	ΑZ,	ΒA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,	CA,
			CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,	FΙ,
			GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KΕ,	KG,
			KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,	ME,
			MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NΙ,	NO,	NZ,	OM,	PG,	PH,	PL,
			PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,	TN,
			TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW				
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	ΙE,
			IS,	IT,	LT,	LU,	LV,	MC,	MT,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,
			ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	ΤG,	BW,
			GH,	GM,	ΚE,	LS,	MW,	MΖ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	AZ,
			BY,	KG,	KΖ,	MD,	RU,	ТJ,	TM,	AP,	EA,	EP,	OA					
PRAI	IN	2006	-СН2	216		Α		2006	1129									
	US	2007	-891	256P		P		2007	0223									
GI																		

AΒ A process was disclosed for the preparation and purification of the therapeutically useful anticholesterolemic agent rosuvastatin ${\tt I}$ (R = CO2H, R5a = H, R5b = OH) and its calcium salt I (R = CO2-.1/2Ca2+, R5a = H, R5b = OH) via the formation of the salt of rosuvastatin with dehydroabietylamine (II). The process comprised an olefination reaction of N-[4-(4-fluorophenyl)-5-formyl-6-(1-methylethyl)-2pyrimidinyl]-N-methylmethanesulfonamide with (R)-

Ph3P:CHCOCH2CH(OSiMe2CMe3)CH2CO2Me, subsequent stereoselective reduction ketone moiety of the resulting ester I (R = CO2Me, R5aR5b = O) using Et2BOMe followed by addition of II to the reaction mixture to give the rosuvastatin dehydroabietylamine salt which was subsequently purified, and finally, conversion of the dehydroabietylamine salt to rosuvastatin calcium and rosuvastatin as the free acid.

```
L4
     ANSWER 8 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
     2008:607860 CAPLUS
ΑN
     148:585906
DN
     Process for the preparation of 4-(4-fluorophenyl)-6-isopropyl-2-
TΙ
     (N-methyl-N-methylsulfonylamino)-5-pyrimidinecarboxaldehyde and tert-butyl
     2-[(4R,6S)-6-formyl-2,2-dimethyl-1,3-dioxan-4-yl]-acetate, key
     intermediates of rosuvastatin
     Joshi, Narendra Shriram; Khile, Anil Shahaji; Kajale, Yogesh Baburao;
IN
     Kamble, Hemant Harishchandra
     Glenmark Pharmaceuticals Limited, India
PA
SO
     PCT Int. Appl., 29pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                          KIND DATE
                                               APPLICATION NO.
                                                                         DATE
                          ____
                                                _____
                                                                         _____
                           A2 20080522 WO 2007-IN441
     WO 2008059519
                                                                         20070924
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
              PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
              BY, KG, KZ, MD, RU, TJ, TM
                            Α
PRAI IN 2006-MU1556
                                   20060925
     CASREACT 148:585906
OS
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB A process for the preparation of 4-(4-fluorophenyl)-6-isopropyl-2-(N-methyl-N-methylsulfonylamino)-5-pyrimidine carboxaldehyde (I, R1 = CHO) and tert-Bu <math>2-[(4R,6S)-6-formyl-2,2-dimethyl-1,3-dioxan-4-yl]-acetate (II, R2 = CHO), key intermediates for rosuvastatin, comprises pyridine-sulfur trioxide complex-mediated oxidation of I (R1 = CH2OH) and II (R2 = CH2OH), resp. The first intermediate is prepared via β -alanine-catalyzed condensation of 4-fluorobenzaldehyde with Me isobutyrylacetate followed by heterocyclization with S-methylisothiourea sulfate to give III and further multistep transformations leading to I (R1 = CHO). Thus, a suspension of pyridine-sulfur trioxide complex, pyridine and DMSO is added to a solution of I (R1 = CH2OH) in CH2C12 containing DMSO and DIPEA at 0-5° followed by 1h stirring at 0-5°, quenching by water addition and workup to give (I, R1 = CHO) in 90.5% yield.

```
L4
       ANSWER 9 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
AN
       2008:552714 CAPLUS
       148:537968
DN
       A process for preparing rosuvastatin calcium
TI
IN
       Dandala, Ramesh; Mallela, Sambhu Prasad Sarma; Garimella, Narayan K. A. S.
       S.; Nandi, Sukumar; Buridipad, Sunil Kumar; Nangi, Gangadhar Bhima
       Shankar; Meenakshisunderam, Sivakumaran
       Aurobindo Pharma Limited, India
PA
       PCT Int. Appl., 36pp.
SO
       CODEN: PIXXD2
DT
       Patent
LA
       English
FAN.CNT 1
       PATENT NO.
                                     KIND
                                               DATE
                                                                 APPLICATION NO.
                                                                                                   DATE
                                     ____
                                                                 _____
                                               _____
                                                                                                   _____
       WO 2008053334
                                      Α2
                                               20080508
                                                                 WO 2007-IB3312
                                                                                                   20071029
PΤ
       WO 2008053334
                                      А3
                                               20080703
             W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                   CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
             CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BI, CF, CG, CT, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, RW
                   BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
                   GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                   BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI IN 2006-CH1994
                                               20061031
                                    Α
      CASREACT 148:537968; MARPAT 148:537968
OS
GΙ
```

Ι

The invention relates to a process for the production of rosuvastatin calcium, useful for the treatment of hypercholesterolemia. For instance, Wittig reaction of N-[4-(4-fluorophenyl)-5-formyl-6-(1-methylethyl)-2-pyrimidinyl]-N-methylmethanesulfonamide with Me (triphenylphosphoranylidene)acetate (96.0%) followed by reduction (98.0%) and oxidation (98.5%) gave the compound I.

Rosuvastatin calcium was then prepared from the compound I in a multi-step synthesis.

```
ANSWER 10 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
       2008:475738 CAPLUS
ΑN
DN
       148:471771
       Novel process for the preparation of statins and their pharmaceutically
TΙ
       acceptable salts thereof
ΙN
       Satyanarayana Reddy, Manne; Thirumalai Rajan, Srinivasan; Sahadeva Reddy,
       Maramreddy
PA
       India
       PCT Int. Appl., 89pp.
SO
       CODEN: PIXXD2
DT
       Patent
LA
       English
FAN.CNT 1
                                               DATE
                                                               APPLICATION NO.
       PATENT NO.
                                   KIND
                                                                                                  DATE
                                   ____
                                              _____
                                                                _____
                                                                                                 _____
                                    A2 20080417 WO 2007-IN459
       WO 2008044243
                                                                                                  20071005
PΤ
             W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                   CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
                   GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ
                   GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                   BY, KG, KZ, MD, RU, TJ, TM
                                    A
PRAI IN 2006-CH1864
                                             20061009
       CASREACT 148:471771; MARPAT 148:471771
OS
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB Novel process for the preparation of statins I [R = R1, R2, R3, R4, R5, R6, R7; M = metal ion; dashed line = single or double bond] via amides II [R', R'' = H, lower alkyl, aryl, aralkyl; NR'R'' = (un)substituted mono- or bicyclic heterocycle optionally containing addnl. heteroatoms (N, O, S); P1, P2 = alc. protecting group; P1P2 = diol protecting group] and their pharmaceutically acceptable salts. Thus, rosuvastatin calcium I [R = R1, M = Ca, dashed line = double bond] was prepared from N,N-diisopropylacetamide via alkylation with (S)-C1CH2CH(OH)CH2CO2Et, stereoselective reduction with Et2BOMe/NaBH4, isopropylidenation with Me2C(OMe)2, acetoxylation with NaOAc, deacetylation with K2CO3 in MeOH, oxidation with NaOC1/TEMPO, Wittig reaction with R1CH2P(:O)Ph2, deisopropylidenation with aqueous HCl in MeCN, basic hydrolysis with aqueous NaOH,

salt formation with Me3CNH2, basic hydrolysis with aqueous NaOH and salt formation with $CaCl_2/Ca(OAc)_2$.

- L4 ANSWER 11 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2008:317104 CAPLUS
- TI Aortic sclerosis, aortic stenosis and lipid-lowering therapy
- AU Rosenhek, Raphael; Baumgartner, Helmut
- CS Department of Cardiology, Medical University of Vienna, Vienna, A-1090, Austria
- SO Expert Review of Cardiovascular Therapy (2008), 6(3), 385-390 CODEN: ERCTAS; ISSN: 1477-9072
- PB Future Drugs Ltd.
- DT Journal
- LA English
- AΒ Calcific aortic stenosis (AS) is a progressive disease that has, until recently, been considered to be a degenerative and unmodifiable process induced by long-lasting mech. stress. However, histopathol. studies have now demonstrated that the development and progression of calcific AS is based on an active process, sharing a number of similarities with atherosclerosis. Inflammation, lipid infiltration, dystrophic calcification, ossification, platelet deposition and endothelial dysfunction have been observed in both diseases. In addition, several studies have suggested that AS and atherosclerosis share a number of risk factors, such as hypercholesterolemia, elevated lipoprotein (a), smoking, hypertension and diabetes. These findings suggest that statin therapy could be beneficial in AS by its lipid-lowering and/or anti-inflammatory effects, as is the case in atherosclerosis. Although this concept has been supported by exptl. work and by four retrospective clin. studies observing significantly slower rates of hemodynamic progression in statin-treated patients, a prospective randomized trial (Scottish Aortic Stenosis and Lipid Lowering Trial, Impact on Regression [SALTIRE]; 80mg of atorvastatin vs placebo) yielded a neg. result. In contrast to the retrospective analyses, according to the study protocol, patients with hyperlipidemia had to be excluded in this trial. A recent prospective study (Rosuvastatin Affecting Aortic Valve Endothelium [RAAVE]) treating hypercholesteremic patients with rosuvastatin, found a significantly slower rate of progression in these patients compared with patients with normal cholesterol levels who were left untreated, suggesting that statin therapy may only be beneficial in patients with hyperlipidemia. Lipid-lowering therapy with statins can, therefore, currently only be recommended in this subgroup of patients with AS.
- RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 12 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
    2008:124470 CAPLUS
ΑN
DN
    148:198648
    Process for preparing powder comprising nanoparticles of sparingly soluble
TΙ
IN
    Bae, Joon Ho; Lee, Jong Hwi; Lee, Hyeok; Kim, Jung Ju
PA
    Amorepacific Corporation, S. Korea
SO
    PCT Int. Appl., 33pp.
    CODEN: PIXXD2
DT
    Patent
    English
LA
FAN.CNT 1
                      KIND DATE
    PATENT NO.
                                       APPLICATION NO.
                       ____
                                         _____
                       A1 20080131 WO 2007-KR3599
    WO 2008013416
                                                               20070726
PΙ
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
            CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
            GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
            KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
        GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM
PRAI KR 2006-70556
                       A
                             20060727
    A powder comprising nanoparticles of a sparingly water-soluble drug prepared in
    accordance with the present invention exhibits enhanced bioavailability
    without generating adverse side effects caused by impurities, while the
    nano-particle size of the drug remains unchanged when administered.
    Accordingly, the powder can be useful for the development of a formulation
    of a sparingly water-soluble drug for oral and parenteral administration.
             THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

- L4 ANSWER 13 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2008:82684 CAPLUS
- DN 148:394004
- TI Attenuation of NADPH Oxidase Activation and Glomerular Filtration Barrier Remodeling With Statin Treatment
- AU Whaley-Connell, Adam; Habibi, Javad; Nistala, Ravi; Cooper, Shawna A.; Karuparthi, Poorna R.; Hayden, Melvin R.; Rehmer, Nathan; DeMarco, Vincent G.; Andresen, Bradley T.; Wei, Yongzhong; Ferrario, Carlos; Sowers, James R.
- CS Department of Internal Medicine and the Diabetes and Cardiovascular Laboratory, University of Missouri School of Medicine, Columbia, MO, USA
- SO Hypertension (2008), 51(2, Pt. 2), 474-480 CODEN: HPRTDN; ISSN: 0194-911X
- PB Lippincott Williams & Wilkins
- DT Journal
- LA English
- AΒ Activation of reduced nicotinamide-adenine dinucleotide phosphate (NADPH) oxidase by angiotensin II is integral to the formation of oxidative stress in the vasculature and the kidney. 3-Hydroxy-3-methylglutaryl-CoA reductase inhibition is associated with redns. of oxidative stress in the vasculature and kidney and associated decreases in albuminuria. Effects of 3-hydroxy-3-methylglutaryl-CoA reductase inhibition on oxidative stress in the kidney and filtration barrier integrity are poorly understood. To investigate, we used transgenic TG(mRen2)27 (Ren2) rats, which harbor the mouse renin transgene and renin-angiotensin system activation, and an immortalized murine podocyte cell line. We treated young, male Ren2 and Sprague-Dawley rats with rosuvastatin (20 mg/kg IP) or placebo for 21 days. Compared with controls, we observed increases in systolic blood pressure, albuminuria, renal NADPH oxidase activity, and 3-nitrotryosine staining, with redns. in the rosuvastatin-treated Ren2. Structural changes on light and transmission electron microscopy, consistent with periarteriolar fibrosis and podocyte foot-process effacement, were attenuated with statin treatment. Nephrin expression was diminished in the Ren2 kidney and trended to normalize with statin treatment. Angiotensin II-dependent increases in podocyte NADPH oxidase activity and subunit expression (NOX2, NOX4, Rac, and p22phox) and reactive oxygen species generation were decreased after in vitro statin treatment. These data support a role for increased NADPH oxidase activity and subunit expression with resultant reactive oxygen species formation in the kidney and podocyte. Furthermore, statin attenuation of NADPH oxidase activation and reactive oxygen species formation in the kidney/podocyte seems to play roles in the abrogation of oxidative stress-induced filtration barrier injury and consequent albuminuria.

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2008:51765 CAPLUS

DN 148:215069

 ${
m TI}$ Process for preparation of Rosuvastatin calcium intermediate

IN Huang, Qingyun

PA Anhui Qingyun Pharmaceutical and Chemical Co., Ltd., Peop. Rep. China

SO Faming Zhuanli Shenging Gongkai Shuomingshu, 18pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101100459	А	20080109	CN 2007-10024034	20070714
PRAI	CN 2007-10024034		20070714		
GI					

AB This invention provides a process for the preparation of Rosuvastatin calcium intermediate I, which comprises reaction of II with organophosphorus compds. to obtain ketal or imine intermediates, followed by hydrolysis under acidic condition to give the title compound For example, II was reacted with di-Et [2-(cyclohexylamino)vinyl]phosphona te in THF in the presence of sodium hydride, followed by hydrolysis in the presence of oxalic acid to give I (84%). The process has mild reaction condition, low cost, toxicity, energy consumption, and easy purification

- L4 ANSWER 15 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2008:15231 CAPLUS
- DN 148:183073
- TI Effect of rosuvastatin treatment on plasma visfatin levels in patients with primary hyperlipidemia
- AU Kostapanos, Michael S.; Derdemezis, Christos S.; Filippatos, Theodosios D.; Milionis, Haralampos J.; Kiortsis, Dimitrios N.; Tselepis, Alexandros D.; Elisaf, Moses S.
- CS Department of Internal Medicine, School of Medicine, University of Ioannina, Ioannina, 451 10, Greece
- SO European Journal of Pharmacology (2008), 578(2-3), 249-252 CODEN: EJPHAZ; ISSN: 0014-2999
- PB Elsevier B.V.
- DT Journal
- LA English
- AB Visfatin is a novel adipokine involved in the process of atherosclerosis. We assessed the effect of rosuvastatin on plasma visfatin levels in patients with primary hyperlipidemia. Eighty hyperlipidemic patients without evidence of cardiovascular disease were randomized to receive either rosuvastatin 10 mg/day or therapeutic lifestyle changes intervention. Plasma visfatin levels were determined at baseline and after 12-wk post-randomization. Rosuvastatin induced a significant decrease in plasma visfatin levels (17.1 \pm 2.1 vs. 15.5 \pm 2.0 ng/mL, P = 0.03). This effect correlated with baseline visfatin levels (r = 0.51, P < 0.01) and was independent of any lipid-lowering actions of rosuvastatin.
- RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L4
       ANSWER 16 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
       2007:1454816 CAPLUS
ΑN
DN
       148:79266
       Process for the preparation of carbohydrate derivatives of heptanoic acids
TΙ
IN
       Klyosov, Anatole; Platt, David
PA
       Pro-Pharmaceuticals, Inc., USA
SO
       PCT Int. Appl., 56pp.
       CODEN: PIXXD2
DT
       Patent
LA
       English
FAN.CNT 1
       PATENT NO.
                                      KIND
                                                 DATE
                                                                   APPLICATION NO.
                                                                                                       DATE
                                      ____
                                                 _____
                                                                   _____
                                       A2
                                                 20071221
                                                                   WO 2007-US70786
                                                                                                       20070608
PΙ
       WO 2007146823
       WO 2007146823
                                       АЗ
                                                 20080306
             W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                    CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
                    GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
                   KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
             MG, MK, MN, MW, MX, MY, MZ, NA, NG, N1, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KC, KZ, MD, BU, TI, TM, AD, EA, ED, OA
                    BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI US 2006-804242P
                                     Р
                                                20060608
       MARPAT 148:79266
OS
GΙ
```

AB A process for the preparation of carbohydrate derivs. of heptanoic acids, I, wherein at least one of R' or R'' is a monosaccharide, galactose derivative; R is an (un)substituted aromatic ring, heterocyclic ring system such as indole, pyrrole, pyridine, etc. or (un)substituted cyclic rings are presented. Further, II, wherein X is a monosaccharide or a galactose derivative is alos presented. Hence, I and II can be successfully employed as theraputic agents in the inhibition of statins.

- L4 ANSWER 17 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:1444836 CAPLUS
- DN 148:230008
- TI Insulin resistance, oxidative stress, and podocyte injury: role of rosuvastatin modulation of filtration barrier injury
- AU Whaley-Connell, Adam; DeMarco, Vincent G.; Lastra, Guido; Manrique, Camila; Nistala, Ravi; Cooper, Shawna A.; Westerly, Blair; Hayden, Melvin R.; Wiedmeyer, Charles; Wei, Yongzhong; Sowers, James R.
- CS Department of Internal Medicine, Diabetes and Cardiovascular Laboratory, University of Missouri-Columbia School of Medicine, Columbia, MO, USA
- SO American Journal of Nephrology (2008), 28(1), 67-75 CODEN: AJNED9; ISSN: 0250-8095
- PB S. Karger AG
- DT Journal
- LA English
- AB Background/Aim: There is an emerging relationship between insulin resistance/hyperinsulinemia, oxidative stress, and glomerular injury manifesting as albuminuria. HMG-CoA reductase inhibitors (statins) have been shown to reduce oxidative stress in the vasculature as well as albuminuria in animal models and in human studies. The glomerular filtration barrier is emerging as a critical determinant of albumin filtration. We investigated the effects of insulin resistance and rosuvastatin or placebo on the glomerular filtration barrier. Method: Young Zucker obese and Zucker lean rats (6-7 wk old) were treated with the HMG-CoA reductase inhibitor rosuvastatin (10 mg/kg/day) or placebo for 21 days. Results: In the Zucker obese rats, homeostasis model assessment-insulin resistance index, oxidative markers (NADPH oxidase activity, reactive oxygen species, and urine isoprostane formation), podocyte foot process effacement, and albuminuria were increased as compared with Zucker lean controls, independent of increases in systolic blood pressure. Albuminuria correlated with podocyte foot process effacement (r2 = 0.61) and insulin level (r2 = 0.69). Rosuvastatin treatment improved albuminuria, filtration barrier indexes, and oxidative stress via copper/zinc superoxide dismutase. Conclusions: These data indicate that hyperinsulinemia together with insulin resistance is associated with podocyte injury and albuminuria independent of the systolic blood pressure. Further, rosuvastatin modulates filtration barrier injury and albuminuria and improves oxidative stress measures via copper/zinc superoxide dismutase.
- RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 18 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2007:1391026 CAPLUS
ΑN
DN
      148:32066
      Enzymic synthesis of epoxide intermediates for pharmaceutical compounds
TΙ
      such as statins
      Mink, Daniel; Lutje Spelberg, Jeffrey Harald; De Vries, Erik Jan
IN
PA
      Dsm Ip Assets B.V., Neth.
      PCT Int. Appl., 31pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
                              KIND DATE
      PATENT NO.
                                                   APPLICATION NO.
                              ____
                                                       _____
      WO 2007137816
                               A1 20071206 WO 2007-EP4743
                                                                                     20070529
PΙ
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
                GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
           GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
                BY, KG, KZ, MD, RU, TJ, TM
PRAI EP 2006-11099
                                A 20060530
     CASREACT 148:32066
OS
      The invention relates to a process for the preparation of
AΒ
      intermediates, which can suitably be used in the preparation of active
      pharmaceutical ingredients, in particular in the preparation of HMG-CoA
      reductase inhibitors, more in particular in the preparation of statins, for
      example lovastatin, cerivastatin, rosuvastatin, simvastatin,
      pravastatin, atorvastatin or fluvastatin, most in particular of
      atorvastatin. The intermediates are prepared according to the
      process of the invention by reaction of (enantiomerically
      enriched) 6-chloromethyl-4-hydroxy-tetrahydro-pyran- 2-one or the ring
      opened formed thereof with cyanide in the presence of a haloalc.
      dehalogenase, preferably HheA from Arthrobacter sp. strain AD2.
                  THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
                  ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
ANSWER 19 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2007:1303080 CAPLUS
ΑN
      147:520751
DN
      Process for the preparation of enantiomerically enriched nitriles using
TΙ
      halo alcohol dehalogenase
      Mink, Daniel; Lutje Spelberg, Jeffrey Harald; Vries de Erik, Jan
IN
PA
      DSM IP Assets B.V., Neth.
      PCT Int. Appl., 21pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
                              KIND DATE
      PATENT NO.
                                                  APPLICATION NO.
                              ____
                                                      _____
                               A1 20071115 WO 2007-EP3852
      WO 2007128469
                                                                                   20070502
PΙ
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB,
                GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,
           GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
                BY, KG, KZ, MD, RU, TJ, TM
                          A 20060503
PRAI EP 2006-9164
      US 2006-796894P
                                Ρ
                                        20060503
      MARPAT 147:520751
OS
      The invention relates to a process for the preparation of an
AΒ
      enantiomerically enriched nitrile by reacting an epihalohydrin (derivative)
      with Br- and CN- in the presence of an enantioselective haloalc.
      dehalogenase. The process of the invention leads to
      enantiomerically enriched nitriles in a high yield and in a high
      enantiomeric excess. Preferably the haloalc. dehalogenase used is HheC,
      more preferably HheC from Agrobacterium radiobacter AD1, most preferably
      the W249F mutant from HheC from Agrobacterium radiobacter AD1. In one
      preferred embodiment of the invention the epihalohydrin (derivative) is
      epichlorohydrin. The enantiomerically enriched nitriles obtained by the
      process of the invention are especially suitable as intermediates in the
      preparation of statins, in particular of atorvastatin or rosuvastatin
```

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 20 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
       2007:1278494 CAPLUS
ΑN
DN
       147:522015
       Novel process for statins and its pharmaceutically acceptable salts
TΙ
       thereof
IN
       Reddy, Manne Satyanarayana; Rajan, Srinivasan Thirumalai; Reddy,
       Maramreddy Sahadeva
       Satyanarayana Reddy, Manne, India; Thirumalai Rajan, Srinivasan; Sahadeva
PA
       Reddy, Maramreddy
       PCT Int. Appl., 114 pp.
SO
       CODEN: PIXXD2
DT
       Patent
       English
LA
FAN.CNT 1
                                 KIND DATE
                                                            APPLICATION NO.
       PATENT NO.
                                                                                              DATE
                                             _____
                                                              _____
                                  ____
       WO 2007125547
                                   A2
                                             20071108
                                                            WO 2007-IN172
                                                                                              20070430
PΙ
       WO 2007125547
                                   A9
                                             20071221
                                   АЗ
       WO 2007125547
                                             20080403
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
            RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
                  GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                  BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
       IN 2006CH00805 A
                                        20071221 IN 2006-CH805
                                                                                            20060503
PRAI IN 2006-CH805
                                   Α
                                             20060503
       IN 2007-CH606
                                   Α
                                             20070326
       CASREACT 147:522015; MARPAT 147:522015
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB A process was disclosed for the preparation of statins and their pharmaceutically acceptable salts, such as I [R = cyclic statin moiety, such as from rosuvastatin, fluvastatin, pitavastatin, etc.; R1 = OH, O-.M; M = Na+, K+, 1/2Mg2+, 1/2Ca2+]. Thus, rosuvastatin calcium II (R1 = 0-.1/2Ca2+, R2 = R3 = H) was prepared starting from 5-(bromomethyl)-4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]pyrimidine, 5-difluoromethoxy-2mercaptobenzimidazole, and 3,5-dideoxy-2,4-0-(1-methylethylidene)-erythrohexuronic acid 1,1-dimethylethyl ester (III) via an olefinic coupling reaction of intermediate sulfone IV with ester III using cesium carbonate in DMSO to form diol-protected ester II (R1 = CMe3, R2R3 = CMe2), conversion of the protected ester rosuvastatin tert-butylamine salt II (R1 = O-.H3N+CMe3, R2 = R3 = H), and finally, preparation of the desired calcium salt by treatment of the tert-Bu amine salt with NaOH followed by treatment of the reaction mixture with CaCl2 and (MeCO2-)2Ca2+. The prepared statins and their salts are therapeutically useful as HMG-CoA reductase inhibitors.

- L4 ANSWER 21 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:1208628 CAPLUS
- TI Isoprenoid depletion by statins antagonizes cytokine-induced down-regulation of endothelial nitric oxide expression and increases no synthase activity in human umbilical vein endothelial cells
- AU Jantzen, F.; Koenemann, S.; Wolff, B.; Barth, S.; Staudt, A.; Kroemer, H.-K.; Dahm, J. B.; Felix, S. B.; Landsberger, M.
- CS Department of Internal Medicine B, Ernst Moritz Arndt University, Greifswald, Germany
- SO Journal of Physiology and Pharmacology (2007), 58(3), 503-514 CODEN: JPHPEI; ISSN: 0867-5910
- PB Polish Physiological Society
- DT Journal
- LA English
- Endothelial dysfunction and atherosclerosis are associated with an AΒ inflammation-induced decrease in endothelial nitric oxide synthase (eNOS) expression. Based on the differences between hydrophobic and hydrophilic statins in their reduction of cardiac events, we analyzed the effects of rosuvastatin and cerivastatin on eNOS and inducible NO synthase (iNOS) expression and NOS activity in $\text{TNF}-\alpha$ -stimulated human umbilical vein endothelial cells (HUVEC). Both statins reversed down-regulation of eNOS mRNA and protein expression by inhibiting HMG-CoA reductase and isoprenoid synthesis. Cerivastatin tended to a more pronounced effect on eNOS expression compared to rosuvastatin. NOS activity - measured by conversion of [3H]-L-arginine to [3H]-L-citrulline - was enhanced under treatment with both drugs due to inhibition of HMG-CoA reductase. Statin-treatment reduced iNOS mRNA expression under normal conditions, but had no relevant effects on iNOS mRNA expression in cytokine-treated cells. Rosuvastatin and cerivastatin reverse the detrimental effects of TNF-lpha-induced down-regulation in eNOS protein expression and increase NO synthase activity by inhibiting HMG-CoA reductase and subsequent blocking of isoprenoid synthesis. These results provide evidence that statins have beneficial effects by increasing eNOS expression and activity during the atherosclerotic process.
- RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L4
      ANSWER 22 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
ΑN
      2007:1204292 CAPLUS
DN
      147:495615
TI
      Rosuvastatin zinc salt
IN
      Vago, Pal; Simig, Gyula; Clementis, Gyoergy; Toempe, Peter; Tapai,
PA
      Egis Gyogyszergyar Nyrt., Hung.
      PCT Int. Appl., 31pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
      PATENT NO.
                              KIND DATE
                                                  APPLICATION NO.
                              ____
                                                       ______
      WO 2007119085
                               A1 20071025 WO 2007-HU30
                                                                                     20070412
PΙ
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
                CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB,
                 GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,
           GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ
                 GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                 BY, KG, KZ, MD, RU, TJ, TM
      HU 2006000293 A2 20071228
                                                       HU 2006-293
                                                                                      20060413
      HU 2006000293
                               A3 20080428
PRAI HU 2006-293
                                Α
                                         20060413
      MARPAT 147:495615
OS
      The present invention is related to rosuvastatin Zn salt, the
AΒ
      process for preparation thereof and medicinal products containing said
      salt. Rosuvastatin In salt according to the present invention
      was prepared by reacting rosuvastatin with a Zn alcoholate, Zn
      enolate or an inorg. or organic In salt and isolating the thus obtained
      rosuvastatin Zn salt (2:1).
RE.CNT 7
                  THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
                  ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

L4 ANSWER 23 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:1011243 CAPLUS

DN 149:32321

TI Process for preparing 4-(4-fluorophenyl)-6-isopropyl-2-(N-methyl-N-methylsulfonylamino)-5-pyrimidinecarbaldehyde and use thereof

IN Radl, Stanislav; Stach, Jan

PA Zentiva, A. S., Czech Rep.

SO Czech Rep., 7pp. CODEN: CZXXED

DT Patent

LA Czech

FAN.CNT 1

GΙ

T T TT	0111 1				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	CZ 298330	В6	20070829	CZ 2004-821	20040719
PRAI	CZ 2004-821		20040719		
OS	CASREACT 149:32321				

In the present invention, there is disclosed a process for preparing 4-(4-fluorophenyl)-6-isopropyl-2-(N-methyl-N-methylsulfonylamino)-5-pyrimidinecarbaldehyde I wherein the preparation process is characterized by oxidizing [4-(4-fluorophenyl)-6-isopropyl-2-(N-methyl-N-methylsulfonylamino)-5-pyrimidin-5-yl]methanol II in the presence of a catalytic amount of a nitroxyl radical-containing agent, preferably 2,2,6,6-tetramethylpiperidin-1-oxyl or 4-acetamido-2,2,6,6-tetramethylpiperidin-1-oxyl. So prepared compound I is then used for the preparation of rosuvastatin.

```
ANSWER 24 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
       2007:998708 CAPLUS
ΑN
DN
       147:322770
       Process for preparing rosuvastatin calcium
TI
IN
       Patel, Dhimant Jasubhai; Kumar, Rajiv; Dwivedi, Shri Prakash Dhar
PA
       Cadila Healthcare Limited, India
SO
       PCT Int. Appl., 19pp.
       CODEN: PIXXD2
DT
       Patent
       English
LA
FAN.CNT 1
                                                            APPLICATION NO.
       PATENT NO.
                                  KIND
                                            DATE
                                                                                             DATE
                                  ____
       WO 2007099561
                                  A1
                                            20070907
                                                           WO 2007-IN83
PΙ
                                                                                             20070226
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                  CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                  GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
                  KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK,
                  MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
            MN, MW, MX, MI, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PI, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, MC, WZ, MD, BH, TT, TM
                  KG, KZ, MD, RU, TJ, TM
                             А
                                        20071026
       IN 2006MU00271
                                                            IN 2006-MU271
                                                                                              20060227
PRAI IN 2006-MU271
                                    Α
                                            20060227
      CASREACT 147:322770
OS
GΙ
```

AB A process was disclosed for the preparation of highly pure amorphous rosuvastatin calcium I (R = R1 = H, R2 = CO2-.1/2Ca2+) substantially free of impurities as determined by HPLC. The process comprised deprotection of acetonide ester I (RR1 = CMe2, R2 = CO2CMe3) in MeOH using oxalic acid in H2O followed by treatment of the resulting diol ester I (R = R1 = H, R2 = CO2CMe3) with NaOH and H2O and HPLC to give the desired rosuvastatin calcium with \geq 99.65% purity.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

Τ

```
ANSWER 25 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
AN
       2007:846111 CAPLUS
       147:219926
DN
       Manufacturing rosuvastatin potassium
TI
IN
       Patel, Dhimant Jasubhai; Kumar, Rajiv; Agarwal, Virendra Kumar
PA
       Cadila Healthcare Limited, India
SO
       PCT Int. Appl., 15pp.
       CODEN: PIXXD2
DT
       Patent
LA
       English
FAN.CNT 1
       PATENT NO.
                                   KIND
                                              DATE
                                                               APPLICATION NO.
                                                                                                DATE
                                                               _____
                                    ____
                                              _____
       WO 2007086082
                                    A2
                                              20070802
                                                               WO 2007-IN37
                                                                                                20070125
PΙ
       WO 2007086082
                                    А3
                                              20070920
                  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                  CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                  GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
                  KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK,
            RP, RR, RZ, LA, LC, LR, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY
                  GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
                  KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
                               A
PRAI IN 2006-MU1217
                                         20060130
      CASREACT 147:219926; MARPAT 147:219926
OS
GΙ
```

AB A process of manufacturing of Rosuvastatin potassium is disclosed. The process comprises the steps of treating Rosuvastatin protected compound (I) with an HCl and then KOH in methanol to form Rosuvastatin potassium and then isolation.

L4 ANSWER 26 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:844109 CAPLUS

DN 147:235189

TI Process for preparation of statins with high syn to anti ratio

IN Niddam-Hildesheim, Valerie; Balanov, Anna; Chen, Kobi

PA Israel

SO U.S. Pat. Appl. Publ., 13pp., Cont.-in-part of U.S. Ser. No. 20,834. CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	T 7T A .	5111 2						
		PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
Ρ	Ι	US 20070179166	A1	20070802	US 2006-520295	20060912		
		US 20050159615	A1	20050721	US 2004-20834	20041223		
		JP 2008031168	A	20080214	JP 2007-191419	20070723		
Ρ	RAI	US 2003-532458P	P	20031224				
		US 2004-547715P	P	20040224				
		US 2004-20834	A2	20041223				
		US 2005-716802P	P	20050912				
		JP 2006-545612	A3	20041223				
0	S	CASREACT 147:235189;	MARPAT	147:235189				
G	I							

AB Provided is a process for reduction of statin keto esters and purification of diol esters of the statins through selective crystallization A process for preparing rosuvastatin diol ester by reduction of I wherein R1 is (un)branched C1-4 alkyl; at least one of X is forms a double bond to give a ketone and at most one X is H; are claimed.

Rosuvastatin diol ester I (R1 is t-Bu; X is H) was obtained by reduction of the keto ester derivative with B-methoxy-9-BBN and borohydride.

High

syn to anti ratio was obtained by crystallization of the diol.

L4 ANSWER 27 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:793741 CAPLUS

DN 147:166109

TI Preparation of rosuvastatin

IN Balanov, Anna; Shenkar, Natalia; Niddam-Hildesheim, Valerie

PA Israel

SO U.S. Pat. Appl. Publ., 23pp., Cont.-in-part of U.S. Ser. No. 360,725. CODEN: USXXCO

DT Patent

LA English

FAN.CNT 5

P AN	·CNI 5				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PΙ	US 20070167625	A1	20070719	US 2006-543357	20061004
	US 20070037979	A1	20070215	US 2006-360725	20060222
PRA	I US 2005-655580P	P	20050222		
	US 2005-676388P	P	20050428		
	US 2005-723491P	P	20051003		
	US 2005-723875P	P	20051004		
	US 2005-732979P	P	20051102		
	US 2005-751079P	P	20051215		
	US 2006-760506P	P	20060119		
	US 2006-762348P	P	20060125		
	US 2006-360725	A2	20060222		
OS	CASREACT 147:166109;	MARPA.	Γ 147:166109		
GI					

AB Processes were disclosed for the preparation of the cholesterol-lowering agent rosuvastatin I (R = H), rosuvastatin salts, such as I (R = 1/2Ca), and synthetic intermediates thereof.

ANSWER 28 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN L4

ΑN 2007:729065 CAPLUS

147:143455 DN

Preparation of alkyl 4-(4-fluorophenyl)-6-isopropyl-2-ΤI [methyl(methylsulfony)amino]pyrimidine-5-carboxylate and its subsequent conversion to N-[4-(4-fluorophenyl)-5-formyl-6-isopropylpyrimidin-2-yl]-Nmethylmethanesulfonamide - a key intermediate in the synthesis of rosuvastatin

Khamar, Bakulesh Mafatlal; Modi, Indravadan Ambalal; Venkatraman, INJayaraman; Ravi, Ponnaiah; Desai, Sanjay Jagadish; Rajput, Amarsingh L.

PAKhamar, Bakulesh, Mafatlal, India; Modi, Indravadan, Ambalal; Desai, Sanjay, Jagadish; Rajput, Amarsingh, L.

PCT Int. Appl., 21 pp. SO CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1																		
	PAT	CENT :	NO.			KIN	D	DATE		-	APPL	ICAT	ION I	. O <i>V</i>		D	ATE	
ΡI		WO 2007074391 WO 2007074391								WO 2	006-	IB37	91		20061228			
	ΜO	2007	0743	91		A3	A3 20080626											
		W:	ΑE,	AG,	AL,	ΑM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
			CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FΙ,	GB,	GD,
			GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KN,
			KP,	KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,
			MN,	MW,	MX,	MY,	MΖ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,
			RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	TJ,	TM,	TN,	TR,	TT,
			TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW						
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	ΙE,
			IS,	IT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,
			CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG,	BW,	GH,
			GM,	KE,	LS,	MW,	MΖ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	AZ,	BY,
			KG,	KZ,	MD,	RU,	ΤJ,	TM,	AP,	EA,	EP,	OA						
PRAI	ΙN	2005	-MU1	632		A		2005	1228									
OS GI	CAS	SREAC	Т 14	7:14	3455	; MAI	RPAT	147	:143	455								

AΒ The present invention discloses a novel process to prepare sulfonamide compound of formula I (R1 = C1-C6 alkyl, R2 = C1-C8 alkyl, cycloalkyl, Ph, CH2Ph, substituted Ph). Sulfonyl ester II was prepared and reacted with N-methylmethanesulfonamide sodium salt in DMF, giving I. I then underwent reduction to the alc. and treatment with calcium hypochloride in CH2Cl2 to give the desired aldehyde intermediate for

rosuvastatin.

- L4 ANSWER 29 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:508947 CAPLUS
- DN 147:31227
- TI Process for preparation of methyl 3(R)-(tert-butyldimethylsilyloxy)-7-[4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]-5-pyrimidinyl]-5-oxo-6(E)-heptenoate as rosuvastatin calcium intermediate
- IN Yuan, Zhedong; Yang, Yulei
- PA Shanghai Institute of Pharmaceutical Industry, Peop. Rep. China
- SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 12pp. CODEN: CNXXEV
- DT Patent
- LA Chinese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	CN 1958593	A	20070509	CN 2005-10110022	20051103
PRAI	CN 2005-10110022		20051103		

OS CASREACT 147:31227

AB This invention provides a process for the preparation of Me 3(R)-(tert-butyldimethylsilyloxy)-7-[4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]-5-pyrimidinyl]-5-oxo-6(E)-heptenoate, which is an useful intermediate for synthesis of rosuvastatin calcium. For example, 4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]-5-pyrimidinecarboxylic acid Et ester was reduced with potassium borohydride, followed by oxidation with K2Cr2O7/H2SO4 and addition of Me 3(R)-(tert-butyldimethylsilyloxy)-6-dimethoxyphosphinyl-5-oxohexanoate to give the title compound in moderate yield. The process has the advantages of cheap raw material, mild reaction conditions, short reaction time, and greatly increased yield.

L4 ANSWER 30 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:493009 CAPLUS

DN 148:284938

TI Process for preparation of statins and novel intermediates thereof

AU Rafeeq, Mohammad; De, Shantanu; Sathyanarayana, Swargam

CS Ranbaxy Laboratories Limited, Haryana, 122001, India

SO IP.com Journal (2007), 7(2B), 8 (No. IPCOM000146174D), 6 Feb 2007 CODEN: IJPOBX; ISSN: 1533-0001

PB IP.com, Inc.

DT Journal; Patent

LA English

FAN.CNT 1

FAN.	ran.cni i					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
	IP 146174D		20070206	IP 2007-146174D	20070206	
PRAI	IP 2007-146174D		20070206			
OS	CASREACT 148:284938					
GI						

AB A novel process was disclosed for the preparation of statins and novel intermediates thereof. The present disclosure in particular provides a process for the preparation of rosuvastatin and fluvastatin using novel intermediates, such as I [R = CO2Et, CH2OH, CHO, CH(OH)CH2COCH2CO2CMe3, CH(OH)CH2CH(OH)CH2CO2CMe3].

L4 ANSWER 31 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:492769 CAPLUS

DN 147:365317

TI Process for preparing rosuvastatin calcium in amorphous form

IN Vakil, Manish H.; Patel, Dhimant J.; Rupapara, Mahesh L.; Bhimani, Girish
H.; Sutariya, Prakash M.; Kumar, Agarwal Virendra

PA Cadila Healthcare Limited, India

SO Indian Pat. Appl., 13pp.

CODEN: INXXBQ

DT Patent

LA English

FAN.CNT 1

T. WIA *	ran. Chi i						
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
PI PRAI	IN 2004MU00459 IN 2004-MU459	А	20070427 20040415	IN 2004-MU459	20040415		
OS	CASREACT 147:365317						
GI							

AB A one-pot process was disclosed for the preparation of the pharmaceutically useful rosuvastatin calcium I (R = CO2-.1/2Ca2+, R1 = R2 = H) in amorphous form. The process comprised hydrolysis of acetonide ester I (R = CO2CMe3, R1R2 = CMe2) with 1.0 N hydrochloric acid in aqueous methanol, conversion of the resulting diol acid I (R = CO2H, R1 = R2 = H) to corresponding sodium salt I (R = CO2-.Na+, R1 = R2 = H) using a suitable base and solvent combination, and finally, treatment of the solution of resulting sodium salt with calcium chloride solution to obtain the desired amorphous from of rosuvastatin calcium.

```
ANSWER 32 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
ΑN
      2007:410688 CAPLUS
      146:421841
DN
TI
      Process for the preparation of statins and tetrahydropyranone
      intermediates.
IN
      Zdenko, Casar
      Lek Pharmaceuticals D.D., Slovenia
PA
SO
      PCT Int. Appl., 66pp.
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
                            KIND DATE
      PATENT NO.
                                                  APPLICATION NO.
                            ____
                                     _____
                                                   _____
                                                  WO 2006-EP9599
      WO 2007039287
                                     20070412
                             A1
                                                                              20061004
PΙ
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
               GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
               KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
               GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
                             A1 20070418
      EP 1775299
                                                 EP 2005-21706
                                                                              20051005
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
               BA, HR, MK, YU
      AU 2006299018
                                      20070412
                                                   AU 2006-299018
                                                                               20061004
                              Α1
      CA 2624471
                              Α1
                                      20070412
                                                   CA 2006-2624471
                                                                               20061004
      EP 1937696
                              Α1
                                      20080702
                                                   EP 2006-806036
                                                                               20061004
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     MX 200804507
                                     20080421
                                                   MX 2008-4507
                              Α
PRAI EP 2005-21706
                                     20051005
                              Α
      WO 2006-EP9599
                              W
                                     20061004
      MARPAT 146:421841
OS
GΙ
```

AB Title compds. (I; X = halo; R1 = protecting group) were prepared in a 6-step process optionally starting from alkyl 3(S)-hydroxy-4-chlorobutyrates. Thus, (R)-3-(tert-butyldimethylsilyloxy)-5-hexenoic acid (preparation given) and NaHCO3 in MeCN at 0° was treated with I2 followed by stirring for 4 h to give 97% of a 77:23 mixture of (4R,6S)- and (4R,6R)-4-(tert-butyldimethylsilyloxy)-6-iodomethyltetrahydropyran-2-one. The (4R,6S)-isomer was isolated by HPLC or 7-fold recrystn. and elaborated

to Rosuvastatin Ca salt.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 33 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T.4
ΑN
     2007:409240 CAPLUS
     146:402001
DN
TΙ
     Process for producing rosuvastatin
IN
     Balanov, Anna; Shenkar, Natalia; Niddam-Hildesheim, Valerie
PA
     Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA,
     PCT Int. Appl., 47pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 5
     PATENT NO.
                          KIND DATE
                                          APPLICATION NO.
                          ____
                                               _____
                                   20070412 WO 2006-US38921
     WO 2007041666
                           A1
                                                                         20061004
PΤ
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
              KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
                                                                          20060222
     US 20070037979
                           A1
                                   20070215
                                               US 2006-360725
     CA 2625290
                            Α1
                                   20070412
                                               CA 2006-2625290
                                                                          20061004
                                  20070912
                                              EP 2006-816290
     EP 1831182
                            Α1
                                                                          20061004
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
              BA, HR, MK, YU
     JP 2008521836
                           Τ
                                   20080626
                                                JP 2007-543631
                                                                          20061004
     MX 200706647
                           Α
                                  20070725
                                               MX 2007-6647
                                                                         20070601
     KR 2007085701
                                  20070827
                                               KR 2007-712545
                                                                         20070601
                           Α
     IN 2008DN02977
                                  20080808
                                               IN 2008-DN2977
                           Α
                                                                          20080410
PRAI US 2005-723875P
                          Р
                                 20051004
     US 2005-732979P
                          Р
                                 20051102
     US 2005-751079P
                          P
                                 20051215
     US 2006-760506P
                          P
                                 20060119
     US 2006-762348P
                          Р
                                  20060125
                          Α
     US 2006-360725
                                  20060222
                          Ρ
     US 2005-655580P
                                  20050222
     US 2005-676388P
                          Р
                                  20050428
                           Р
     US 2005-723491P
                                   20051003
                       W
     WO 2006-US38921
                                   20061004
     CASREACT 146:402001; MARPAT 146:402001
OS
GΙ
```

^{*} STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Process for the preparation of compound I [W = carboxyl protecting group; X = hydroxy protecting group], characterized by Wittig-Horner reaction of compound II [T1, T2 = aryl, alkoxy; W, X = same as above] with a base and compound III, was provided. Thus, to a solution of compound II [T1,

= OEt; X = tert-butyldimethylsilyl; CW = tert-butoxycarbonyl] (100.0 g) in THF (500 mL) was added potassium tert-butoxide (24.7 g) in 3 portions while keeping the temperature below 10° and the reaction was stirred for 15 min. The resulting reaction mixture was treated with compound III (51.0 g) at 0-2° for 2 h, allowed to reach ambient temperature and further stirred for 16-18 h to give compound I [CW = tert-butoxycarbonyl; X = tert-butyldimethylsilyl] (83.2 g), which was converted into rosuvastatin calcium salt in 3 steps.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 34 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:403836 CAPLUS
- DN 147:44930
- TI Focus on the statin research: drug metabolism and transporter profiles of statins
- AU Fujino, Hideki; Kojima, Junji
- CS New Drug Research Laboratories, Kowa Company Ltd., Tokyo, Japan
- SO Focus on Statin Research (2006), 109-137. Editor(s): Wong, B. A. Publisher: Nova Science Publishers, Inc., Hauppauge, N. Y. CODEN: 69JCMW; ISBN: 1-59454-617-7
- DT Conference; General Review
- LA English
- AB A review. The cause of drug-drug interaction is considered to be as follows: the absorption, distribution, excretion and metabolism of medicines are inhibited by the drugs administered concomitantly. The processes involved in metabolic biotransformation, especially those mediated by CYP and UGT, are recognized as a major factor determining the metabolic fate of statins.

UGTs are principally responsible for the glucuronidation of statins leading to lactonization. On the other hand, a remarkable increase in metabolic clearance is noted for all lactones compared with all acids. The metabolic clearance of the lactone for atrovastatin, simvastatin and rosuvastatin was about 70-fold higher than that of the corresponding acid. Also, CYP2Cs were critically involved in the metabolism of cerivastatin, fluvastatin and pitavastatin acid forms. In contrast, CYP2Cs were not involved in the metabolism of the corresponding lactones and instead, CYP3A4 was mainly involved. Moreover, a substantial difference in the metabolic inhibition of statins was found between acids and lactones. These results demonstrate that the acid and lactone forms differ in their metabolic properties. Taking these results into consideration, the metabolism of lactone forms clearly will need to be taken into account when assessing mechanistic aspects of drug-drug interactions involving statins. The role and importance of active carrier systems in the transport of drugs across biol. membranes are now well recognized. An organic anion transporter, OATP2, is critically involved in the uptake of several statins into hepatocytes. Since pravastatin, rosuvastatin and pitavastatin can not undergo metabolism via CYPs, the frequency of drug-drug interaction was believed to be low. However, plasma concns. of these statins increase after the co-administration of cyclosporine. Several researchers reported that cyclosporine inhibited the OATP2-mediated uptake of statins. These results indicate that transporter-mediated inhibition may be an addnl. reason for the clin. interaction of statins with other medicines. Since renal excretion is a minor pathway for the elimination of statins, little impact would be anticipated in patients with renal insufficiency. However, it is essential to know the influence on the pharmacokinetics in special populations such as patients with liver dysfunction and genetic polymorphisms. Remarkable increases in the plasma concns. of statins have been reported in patients with Child-Pugh B liver dysfunction. Moreover, the OATP2*15 allele was associated with an increased plasma concentration of pravastatin. The reduced hepatic clearance associated with a lower hepatic concentration and/or a higher plasma concentration, resulted in an attenuation

lipid-lowering effect or increase in the risk of statin-mediated rhabdomyolysis. On the basis of pharmacokinetic changes of statins, caution is required in patients within these populations. In conclusion, to elucidate the process responsible for the elimination of statins from the systemic circulation, the characterization of CYPs and transporters needs to be taken into account to avoid interactions with statins.

RE.CNT 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 35 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:396833 CAPLUS
- DN 148:239236
- TI Novel process for the preparation of (+)-(3r,5s)-7-(4-fluorophenyl)-6-isopropyl-2-(N-methyl-N-methanesulfonylamino)pyrimidin -5-yl]-3,5-dihydroxy-6-(E)-heptenoic acid calcium salt(2:1)
- IN Reddy, Manne Satyanarayana; Kumar, Muppa Kishore; Rajan, Srinivasan Thirumalai; Reddy, Maram Reddy Sahadeva
- PA India
- SO Indian Pat. Appl., 23pp. CODEN: INXXBQ
- DT Patent
- LA English
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	IN 2005CH00782	A	20060818	IN 2005-CH782	20050622
PRAI	IN 2005-CH782		20050622		

- OS CASREACT 148:239236
- AB A process for the preparation of (+)-(3R,5S)-7-[4-(4-Fluorophenyl)-6-isopropyl-2-(N-Me-N-methanesulfonylamino)pyrimidin -5-yl]-3,5-dihydroxy-6-(E)-heptenoic acid calcium salt (2:1), also known as rosuvastatin calcium. The process for the preparation rosuvastatin calcium involved olefination reaction, addition reactions, and hydrolysis.

- L4 ANSWER 36 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:391367 CAPLUS
- DN 148:17768
- TI Oral pharmaceutical compositions of synthetic lipid lowering agents and a process of preparation thereof
- IN Pravinchandra, Mehta Bharat; Shah, Rajen; Mansukhlal, Doshi Madhukant
- PA M/S. J.B.Chemicals & Pharmaceuticals Ltd., India
- SO Indian Pat. Appl., 13pp. CODEN: INXXBQ
- DT Patent
- LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	IN 2004MU01390	A	20060721	IN 2004-MU1390	20041222
PRAI	IN 2004-MU1390		20041222		

AB The present invention describes a pharmaceutical compns. for oral administration comprising of synthetic lipid lowering agents which have improved stability in acidic environments. The process of manufacturing of such

pharmaceutical composition is also disclosed in the present invention.

L4 ANSWER 37 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:272349 CAPLUS

DN 148:214858

TI Process for preparation of statins and novel intermediates thereof

AU Anon.

CS USA

SO IP.com Journal (2007), 7(2A), 6 (No. IPCOM000145623D), 19 Jan 2007 CODEN: IJPOBX; ISSN: 1533-0001

PB IP.com, Inc.

DT Journal; Patent

LA English

FAN.CNT 1

FAN	FAN. CNI I					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI PRA	IP 145623D I IP 2007-145623D		20070119 20070119	IP 2007-145623D	20070119	
OS	CASREACT 148:214858					
GI						

AB A novel process was disclosed for the preparation of statins, such as rosuvastatin (I) and fluvastatin, and novel intermediates thereof.

L4 ANSWER 38 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:249678 CAPLUS

DN 148:85829

TI A process for the producing pharmaceutical formulations of lipophilic compounds in lipid form

IN Patel, Dinesh Shantilal; Kurani, Shashikant Prabhudas

PA India

SO Indian Pat. Appl., 28pp.

CODEN: INXXBQ

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	IN 2003MU00546	A	20050715	IN 2003-MU546	20030528
PRAT	TN 2003-MU546		20030528		

AB A process for the manufacture of stable pharmaceutical formulations involving various actives such as lipophilic compds. in the form of limpid solns. and a selective solubilizing agent which would be non-toxic and a good carrier for permeation of the active drugs thereby favoring for wide and user friendly application of the drug for various end uses especially as injectable including i.v. and i.m., oral and external agents. The process involves a selective solubilizing agent comprising 2,5-di-O-methyl-1-4,3-6-dianhydro-D-glucitol. The process would avoid the problems and limitations in the use of oils and derivs. of emulsions in providing such soluble forms of various actives/drugs. Importantly, the process is directed to various categories of drugs of a desired quality control, free of problems of toxicity of the solvent.

- L4 ANSWER 39 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:204569 CAPLUS
- DN 146:330422
- TI Rationale and design for a study using intravascular ultrasound to evaluate effects of rosuvastatin on coronary artery atheroma in Japanese subjects COSMOS study (coronary atherosclerosis study measuring effects of rosuvastatin using intravascular ultrasound in Japanese subjects)
- AU Takayama, Tadateru; Hiro, Takafumi; Yamagishi, Masakazu; Daida, Hiroyuki; Saito, Satoshi; Yamaguchi, Tetsu; Matsuzaki, Masunori
- CS Division of Cardiovascular Medicine, Department of Medicine, Nihon University School of Medicine, Tokyo, Japan
- SO Circulation Journal (2007), 71(2), 271-275 CODEN: CJIOBY; ISSN: 1346-9843
- PB Japanese Circulation Society
- DT Journal
- LA English
- AB Background: There have been few multicenter studies using intravascular ultrasound (IVUS) to assess the process of atherosclerosis in a Japanese population with hypercholesterolemia that is being treated with 3-hydroxy-3-methylglutaryl CoA reductase inhibitors for control of low-d. lipoprotein-cholesterol. Methods and Results: An open-label multicenter study is planned to evaluate with IVUS whether treatment with rosuvastatin for 76 wk results in regression of coronary artery atheroma volume in patients who have coronary heart disease (CHD) and hypercholesterolemia. Sample size is 200 subjects with CHD who are to undergo percutaneous coronary intervention. The planned duration is between Oct. 2005 and Oct. 2008. Conclusions: The COSMOS study will be the first multicenter cardiovascular study in a Japanese population and may provide new evidence on the effects of rosuvastatin on the progression of coronary atherosclerotic lesions.
- RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 40 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2007:173706 CAPLUS
ΑN
DN
     146:251655
TΙ
     Process for the synthesis of rosuvastatin calcium
     using L-malic acid for the side chain chirality
IN
     Zlicar, Marko
PA
     Lek Pharmaceuticals D.D., Slovenia
     PCT Int. Appl., 63pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                           KIND DATE
                                            APPLICATION NO.
                           ____
                                                 _____
     WO 2007017117
                            A1 20070215 WO 2006-EP7388
                                                                            20060726
PΤ
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
               GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
              KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
               US, UZ, VC, VN, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
               GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
     SI 22166
                            Α
                                    20070630
                                                 SI 2005-311
                                                                             20051110
     EP 1912953
                             Α1
                                    20080423
                                                EP 2006-762830
                                                                             20060726
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
PRAI SI 2005-220
                           A
                                 20050728
     SI 2005-311
                             Α
                                    20051110
     WO 2006-EP7388
                            W
                                    20060726
     CASREACT 146:251655; MARPAT 146:251655
OS
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- Present invention represents process for the preparation of HMG-CoA reductase inhibitors, in particular rosuvastatin calcium $(I \cdot 1/2 \text{ Ca2+})$ introducing L-malic acid as the source of chirality for the side chain. The process for preparing statins II [R4 =protecting group; R5 = C1-12-alkyl, C3-9-cycloalkyl, C2-8-alkenyl, C5-6-cycloalkenyl, C5-10-aryl, heteroaryl, optionally substituted with halogen, alkyl, alkoxy, aryl; Het = Het1, Het2, Het3, Het4, Het5, Het6; dashed line = single or double bond] comprises reacting Het-CH2P+R1R2R3 A-[R1, R2, R3 = C1-12-alkyl, C3-9-cycloalkyl, C2-8-alkenyl,C5-6-cycloalkenyl, C5-10-aryl, heteroaryl, optionally substituted with halogen, alkyl, alkoxy, aryl; A = anion of a strong anion with a pKa < 4] or Het-CH2P(:0)R2'R3' [R2', R3' = C1-12-alkyl, C3-9-cycloalkyl, C2-8-alkenyl, C5-6-cycloalkenyl, C5-10-aryl, heteroaryl, optionally substituted with halogen, alkyl, alkoxy, aryl] with chiral aldehyde III. Thus, I was prepared from L-malic acid via esterification, silylation, red. with Dibal-H in CH2Cl2 containing MgBr2·OEt2, Wittig reaction with [[4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]pyrimidi-5yl]methyl]methyldiphenylphosphonium bromide in THF containing NaN(SiMe3)2,

condensation with LiCH2CO2CMe3 in THF, stereoselective reduction with NaBH4 in THF/MeOH containing Et2BOMe, saponification with NaOH in aqueous THF followed by precipitation

with aqueous CaCl2.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 41 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2007:127721 CAPLUS
- DN 146:350962
- TI Rosuvastatin Affecting Aortic Valve Endothelium to Slow the Progression of Aortic Stenosis
- AU Moura, Luis M.; Ramos, Sandra F.; Zamorano, Jose L.; Barros, Isabel M.; Azevedo, Luis F.; Rocha-Goncalves, Francisco; Rajamannan, Nalini M.
- CS Hospital Pedro Hispano, Matosinhos, Port.
- SO Journal of the American College of Cardiology (2007), 49(5), 554-561 CODEN: JACCDI; ISSN: 0735-1097
- PB Elsevier Inc.
- DT Journal
- LA English
- Objectives: The objective of this study was to test the effect of a AΒ 3-hydroxy-3-methylglutaryl CoA (HMG CoA) reductase inhibitor on the progression of moderate to severe aortic stenosis as measured by echocardiog. Background: Recent retrospective studies support the hypothesis that statins slow the progression of aortic stenosis. Methods: We performed an open-label, prospective study evaluating 121 consecutive patients with asymptomatic moderate to severe aortic stenosis (aortic valve area \geq 1.0 cm2; mean age 73.7 \pm 8.9 years; 57 men and 64 women), treated with and without rosuvastatin according to the National Cholesterol Education Program Adult Treatment Panel III guidelines. Echocardiog., serum lipid, and inflammatory markers were measured at baseline and every 6 mo for 18 mo. Results: Sixty-one patients (50.4%) with elevated LDL (159.7 \pm 33.4 mg/dL), aortic valve velocity (3.65 \pm 0.64 m/s), and aortic valve area (1.23 \pm 0.42 cm2) received rosuvastatin (20 mg/day), and 60 (49.6%) with a normal LDL (118.6 \pm 37.4 mg/dL), aortic valve velocity (3.62 \pm 0.61 m/s), and aortic valve area $(1.20 \pm 0.35 \text{ cm}^2)$ received no statin. During a mean follow-up of 73 ± 24 wk, the change in aortic valve area in the control group was -0.10 ± 0.09 cm²/yr vs. -0.05 ± 0.12 cm²/yr in the rosuvastatin group (p = 0.041). The increase in aortic valve velocity was 0.24 ± 0.30 m/s/yr in the control group and 0.04 ± 0.38 m/s/yr in the rosuvastatin group (p = 0.007). There was significant improvement in serum lipid and echocardiog. measures of aortic stenosis in the statin group. Conclusions: Prospective treatment of aortic stenosis with rosuvastatin by targeting serum LDL slowed the hemodynamic progression of aortic stenosis. This is the first prospective study that shows a pos. effect of statin therapy for this disease process.
- RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 42 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
AN
      2007:61204 CAPLUS
      146:142423
DN
      Processes for the manufacture of rosuvastatin and intermediates
TI
ΙN
      Butters, Michael; Cox, David Kenneth; Crabb, Jeffrey Norman; Lenger,
      Steven Robert; Murray, Paul Michael; Snape, Evan William
PA
      Astrazeneca UK Limited, UK
      PCT Int. Appl., 37pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
                             KIND
                                                  APPLICATION NO.
      PATENT NO.
                                     DATE
                                                                              DATE
                                                   _____
                             ____
                                     _____
      WO 2007007119
                                     20070118
                                                  WO 2006-GB3543
                                                                               20060703
PΙ
                             Α1
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
               GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
               KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
               US, UZ, VC, VN, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
               GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
                                                                               20060703
      AU 2006268024
                                     20070118
                                                   AU 2006-268024
                              A 1
      CA 2614281
                              Α1
                                     20070118
                                                   CA 2006-2614281
                                                                               20060703
                                     20080402
                                                   EP 2006-779538
      EP 1904456
                                                                               20060703
                              Α1
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
                                                  NO 2007-6660
      NO 2007006660
                              Α
                                     20080109
                                                                               20071228
      IN 2008DN00055
                              Α
                                     20080711
                                                    IN 2008-DN55
                                                                               20080102
      CN 101218210
                              Α
                                     20080709
                                                   CN 2006-80024717
                                                                               20080107
      MX 200800362
                                     20080307
                                                   MX 2008-362
                                                                               20080108
                              Α
      KR 2008024538
                                     20080318
                                                   KR 2008-701929
                                                                               20080124
                              Α
PRAI GB 2005-14078
                                     20050708
                              Α
      WO 2006-GB3543
                              W
                                     20060703
      CASREACT 146:142423; MARPAT 146:142423
OS
GΙ
```

AB A stereoselective aldol process was disclosed for the enantioselective preparation of esters, such as I [R = alkyl, cycloalkyl,

arylalkyl; R3'aR3'b = 0], which are useful intermediates for the synthesis of rosuvastatin I [R = R3'a = H, R3'b = OH]. Thus, rosuvastatin intermediate β -oxo ester I [R = Et, R3'aR3'b = O] was prepared via a condensation reaction with 70% yield of bromide II [R2 = N(Me)SO2Me, R5 = Br] with H2C:CHCN using TBAB, Pd[P(CMe3)3]2, and dicyclohexylmethylamine in toluene to give trans-cyanovinyl derivative II [R2 = N(Me)SO2Me, R5 = CH:CHCN-(E)], conversion with 76% yield of the resulting cyanovinyl derivative to the corresponding aldehyde II [R2 = N(Me)SO2Me, R5 = CH:CHCHO-(E)] using DIBAL in toluene, and finally, an aldol reaction of the resulting aldehyde with H2C:C(OSiMe3)CH:C(OEt)OSiMe3 using (S)-(-)-[(1S)-[1,1]-binaphthalene]-2,2]-diolato(2-)- $\kappa\text{O},\kappa\text{O'}]$ bis(2-propanolato)titanium, Me2N(CH2)2NMe2 and LiCl in THF. The intermediate $\beta\text{-}\textsc{oxo}$ ester was then reduced using NaBH4 and diethylmethoxyborane in MeOH and THF to give the diol I [R = Et, R3'a = H,R3'b = OH] and the resulting diol was further converted to rosuvastatin calcium I [R = 1/2Ca, R3'a = H, R3'b = OH].

```
ANSWER 43 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2006:1357044 CAPLUS
ΑN
     146:100718
DN
     Process for preparing amorphous rosuvastatin calcium
TΙ
     free of impurities
IN
     Casar, Zdenko; Zlicar, Marko
PA
     Lek Pharmaceuticals D.D., Slovenia
     PCT Int. Appl., 42pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                         KIND DATE APPLICATION NO.
     PATENT NO.
                         ----
                                              _____
     WO 2006136407
                          A1 20061228 WO 2006-EP6007
                                                                       20060622
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
              US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
     AU 2006261087
                          A1
                               20061228
                                             AU 2006-261087
                                                                        20060622
                                            CA 2006-2612587
     CA 2612587
                           Α1
                                  20061228
                                                                        20060622
                                  20080423
                                              EP 2006-754501
     EP 1912952
                           Α1
                                                                        20060622
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     IN 2007DN09216
                      A
                                20080118 IN 2007-DN9216
                                                                       20071129
     CN 101208307
                          Α
                                 20080625
                                              CN 2006-80022852
                                                                        20071224
                                               IN 2007-CN5942
     IN 2007CN05942
                          Α
                                 20080627
                                                                        20071224
PRAI SI 2005-188
                          Α
                                  20050624
     WO 2006-EP6007
                                  20060622
OS
     MARPAT 146:100718
     The invention discloses an amorphous form of rosuvastatin
AΒ
     calcium having purity > 99.9% as determined by HPLC area percentage and free
     from any traces of alkali metal impurities. A process for
     preparing pure amorphous rosuvastatin calcium comprises hydrolysis
     of C1-C5 alkyl esters of rosuvastatin, preferably the tert-Bu
     ester of rosuvastatin, with an organic nitrogen base (e.g.,
     guanidines, amidines, amines and quaternary ammonium hydroxides) in the
     presence of water optionally containing an aprotic solvent, followed by
     treatment of the organic salt with a source of calcium. Rosuvastatin
     calcium is an HMG CoA reductase, useful in the treatment of
     hyperlipidemia, hypercholesterolemia and atherosclerosis. Examples
     include the hydrolysis of rosuvastatin in aqueous solution of amines
     and the preparation of various ammonium salts of rosuvastatin.
               THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
L4
     ANSWER 44 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
     2006:1356819 CAPLUS
ΑN
DN
     146:100716
TI
     Process for preparing pure amorphous rosuvastatin
     calcium
IN
     Casar, Zdenko; Zlicar, Marko
PA
     Lek Pharmaceuticals D.D., Slovenia
     PCT Int. Appl., 26pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                                             APPLICATION NO.
     PATENT NO.
                         KIND DATE
                                                                       DATE
                          ____
                                  _____
                                               _____
     WO 2006136408
                          A2
                                  20061228
                                              WO 2006-EP6008
                                                                        20060622
PΙ
                          A3 20070419
     WO 2006136408
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
              US, UZ, VC, VN, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
              CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
     AU 2006261088
                           A1 20061228 AU 2006-261088
                                                                         20060622
                                   20061228
                                               CA 2006-2611920
     CA 2611920
                            Α1
                                                                         20060622
                                  20080430
                                               EP 2006-754502
     EP 1915349
                           A2
                                                                         20060622
             AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     CN 101203496
                          A
                                  20080618 CN 2006-80022673 20071224
     IN 2007CN05944
                            Α
                                  20080627
                                              IN 2007-CN5944
                                                                         20071224
     US 20080188504
                          A1
                                 20080807
                                             US 2008-916599
                                                                         20080107
PRAI SI 2005-187
                                  20050624
                            Α
     WO 2006-EP6008
                                  20060622
                           W
AΒ
     A new process for preparing pure amorphous rosuvastatin
     calcium, substantially free of impurities, is disclosed.
     process comprising hydrolyzing a C1 to C5 alkyl ester of
     rosuvastatin, preferably Me rosuvastatin or tert-Bu
     rosuvastatin, with a base, e.g. sodium hydroxide, in the presence
     of an aprotic solvent, preferably THF and N,N-dimethylacetamide, or in the
     presence of a mixture of an aprotic solvent and water, to obtain a solution of
     rosuvastatin salt, which may be converted to another
     rosuvastatin salt using another cation, e.g. with calcium cation
     to obtain rosuvastatin calcium. Rosuvastatin amine salts may be obtained as well. In another preferred aspect of the
     invention rosuvastatin free acid may be converted to various
     rosuvastatin salts, e.g. to rosuvastatin calcium,
     rosuvastatin sodium or various rosuvastatin amine salts,
     including rosuvastatin solvates, e.g. rosuvastatin
     calcium hydrate. Rosuvastatin calcium is useful in the
     treatment of hyperlipidemia, hypercholesterolemia and atherosclerosis.
     Thus, hydrolysis of rosuvastatin tert-Bu ester in THF and water
     containing NaOH, followed by treatment of the aqueous solution of the
     rosuvastatin sodium salt with calcium chloride, gave amorphous
     rosuvastatin calcium salt.
```

- L4 ANSWER 45 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:1329897 CAPLUS
- DN 146:121975
- TI Process for preparation of tert-Bu [(4R,6S)-6-formyl-2,2-dimethyl-1,3-dioxan-4-yl] acetate
- IN Chen, Zhirong; Wang, Zhihua; Yan, Jianbo
- PA Zhejiang Neo-Dankong Pharmaceutical Co., Ltd., Peop. Rep. China; Zhejiang University
- SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 14pp. CODEN: CNXXEV
- DT Patent
- LA Chinese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI PRAI	CN 1876644 CN 2006-10052219	A	20061213 20060630	CN 2006-10052219	20060630

OS CASREACT 146:121975

This invention provides a process for the preparation of tert-Bu [(4R,6S)-6-formyl-2,2-dimethyl-1,3-dioxan-4-yl]acetate, which is an useful intermediate for synthesizing rosuvastatin. For example, (3S)-3-hydroxy-4-[[(4-methylphenyl)sulfonyl]oxy]butanenitrile was reacted with tert-Bu bromoacetate, followed by reduction with potassium borohydride, addition of 2,2-dimethoxypropane to give, and deprotection in methanol in the presence of sodium methoxide to give tert-Bu [(4R,6S)-6-hydroxymethyl-2,2-dimethyl-1,3-dioxan-4-yl]acetate. The intermediate obtain in the previous step was reacted with oxalyl chloride and DMSO in dichloromethane in the presence of triethylamine to give the title [(4R,6S)-6-formyl-2,2-dimethyl-1,3-dioxan-4-yl]acetate. The process has the advantages of high purity, simple operation, and high yield.

```
ANSWER 46 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
ΑN
     2006:1280988 CAPLUS
DN
     146:45535
     Process for the preparation of n-[4-(4-fluorophenyl)-5-formyl-6-isopropyl-
TI
     pyrimidin-2-yl]-N-methylmethanesulfonamide
IN
     Grumann, Arne; Pietikaeinen, Pekka; Reine, Inese
PA
     Fermion Ov, Finland
     PCT Int. Appl., 20pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                        KIND DATE APPLICATION NO.
     PATENT NO.
                                                                    DATE
                        ____
                                             _____
                                 20061207 WO 2006-FI170
     WO 2006128954
                         A1
                                                                     20060531
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
             KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
             MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
                          A1 20080305
     EP 1893585
                                           EP 2006-755392
                                                                    20060531
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
             BA, HR, MK, YU
PRAI FI 2005-586
                                 20050601
                   A
                         P
     US 2005-685890P
                                 20050601
     WO 2006-FI170
                          W
                                 20060531
OS
     MARPAT 146:45535
     A process for the preparation of N-[4-(4-fluorophenyl)-5-formyl-6-
     isopropylpyrimidin-2-yl]-N-methylmethanesulfonamide is presented.
     title compound is a useful synthon toward the preparation of rosuvastatin
     or pharmaceutically related derivs.
RE.CNT 5
              THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
ANSWER 47 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
AN
     2006:1253106 CAPLUS
     146:7754
DN
     Process for the preparation of rosuvastatin by new
TI
     intermediates
ΙN
     Fischer, Janos; Szemzoe, Attila; Vukics, Krisztina; Erdelyi, Peter;
     Szoeke, Katalin; Donat, Andrea
     Richter Gedeon Vegyeszeti Gyar Rt., Hung.
PA
SO
     PCT Int. Appl., 24pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                            KIND
                                    DATE
                                                  APPLICATION NO.
                                                                             DATE
                            ____
                                                  ______
                                    _____
                                                                             ______
                             A2
                                                  WO 2006-HU49
                                                                             20060526
PΙ
     WO 2006126035
                                    20061130
     WO 2006126035
                             АЗ
                                    20070614
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
              VN, YU, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
              CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
     HU 2005000537
                                    20070502
                                                 HU 2005-537
                                                                             20050526
                             Α2
     HU 2005000537
                             А3
                                    20080428
                                    20080326
                                                 EP 2006-744403
     EP 1902036
                                                                             20060526
                             Α2
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, YU
PRAI HU 2005-537
                             Α
                                    20050526
     WO 2006-HU49
                             W
                                     20060526
     CASREACT 146:7754; MARPAT 146:7754
OS
GΙ
```

AB A process was disclosed for the preparation of rosuvastatin I (R = R3 = R5 = H) and comprised alkaline hydrolysis of an ester I (R = alkyl, R3R5 = CMe2) to give a corresponding acid I (R = H, R3R5 = CMe2),

reacting the acid with an organic or inorg. base to form a salt I (R = $\rm H.1/2Mg$, MeNH2, H.PhCH2NH2, H.HOCH2CH2NH2, etc.; R3R5 = CMe2), eliminating the acetonide group and conversion to the Ca2+ salt of rosuvastatin I (R = $\rm H.1/2Ca$, R3 = R5 = H) using CaCl2.

```
ANSWER 48 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
ΑN
     2006:1224942 CAPLUS
DN
     145:505262
     Process for the asymmetric synthesis of statins
TΙ
IN
     Tararov, Vitali; Boerner, Armin; Koenig, Gerd; Korostylev, Andrei
PA
     Ratiopharm G.m.b.H., Germany
     PCT Int. Appl., 49pp.
     CODEN: PIXXD2
     Patent
DT
LA
     German
FAN.CNT 1
                           KIND DATE
     PATENT NO.
                                                 APPLICATION NO.
                                                                            DATE
                           ____
                                                 _____
                           A2 20061123
A3 20070215
                                                 WO 2006-EP3987
     WO 2006122644
                                                                            20060428
PΙ
     WO 2006122644
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
               GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ,
              LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
               YU, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
               GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
     DE 102005022284 A1
                                 20061123
                                                 DE 2005-102005022284
                                                                             20050513
                                                CA 2006-2608232
     CA 2608232
                             Α1
                                    20061123
                                                                             20060428
                            A2
                                   20080220
                                                EP 2006-742738
     EP 1888600
                                                                             20060428
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR
PRAI DE 2005-102005022284 A 20050513
     WO 2006-EP3987
                        W
                                    20060428
OS
     MARPAT 145:505262
GΙ
```

RO OMe Me Me Me
$$\times$$
 CO OEt II

AB A process was disclosed for the synthesis of statins, such as fluvastatin, rosuvastatin, cerivastatin, glenvastatin and atorvastatin, which are therapeutically useful as hydroxymethylglutaryl CoA (HMG-CoA) reductase inhibitors. Thus, amine I (R = SiPh2CMe3) was via a synthetic sequence which included an enantioselective reduction of ketone II (X = 0) to form alc. II (X = β -OH- α -H) using H2, (R)-TolBINAP and [Ru(C6H6)Cl2]2 in DMF. Atorvastatin intermediate III (R = SiPh2CMe3) was then prepared via a cyclocondensation reaction of amine I (R = SiPh2CMe3) with 2-[2-(4-fluorophenyl)-2-oxo-1-phenylethyl]-4-methyl-3-oxopentanoic acid phenylamide using Me3CCO2H in heptane/THF/toluene.

```
ANSWER 49 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2006:1062704 CAPLUS
ΑN
      145:419163
DN
      Process for preparation of calcium salt of rosuvastatin
TΙ
IN
      Deshpande, Pandurang Balwant; Ramakrishnan, Arul; Nilesh, Balkrishna
      Shrigadi; Sandeep, Mukunda Bahul
PA
      Unichem Laboratories Limited, India
      PCT Int. Appl., 33pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
      PATENT NO.
                               KIND DATE
                                                   APPLICATION NO.
                               ----
                                                         ______
      WO 2006106526
                                A1 20061012 WO 2005-IN265
                                                                                       20050809
PΤ
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                 CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
                 GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK,
           GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG KZ, MD, BU, TT, TM
                 KG, KZ, MD, RU, TJ, TM
                                      20070511
                                                       IN 2005-MU425
EP 2005-815764
                                Α
      IN 2005MU00425
                                                                                         20050404
                                        20071226
      EP 1869005
                                 A1
                                                                                         20050809
           R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
                 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BA,
                 HR, YU
      US 20080161560
                                 A1
                                          20080703
                                                         US 2007-816155
                                                                                      20070813
                                A
PRAI IN 2005-MU425
                                          20050404
      WO 2005-IN265
                                 W
                                          20050809
      CASREACT 145:419163
OS
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB The invention relates to a com. viable process for the preparation of the calcium salt of rosuvastatin (I), which is a HMG-CoA reductase inhibitor used for the prevention or treatment of hypercholesterolemia, hyperlipoproteinemia, and atherosclerosis. The process makes use of novel intermediates (claimed) and less expensive reagents than prior art. The process allows for the preparation of the calcium salt of rosuvastatin (I), illustrated by the following example. Wittig reaction of a pyrimidinecarboxaldehyde (RCHO) with (ethoxycarbonylmethylene)triphenylphosphorane in toluene at reflux gave Et acrylate II. Hydrolysis of the ester was performed using NaOH in methanol at $25-29\,^\circ\text{C}$ for 8 h. The acrylic acid was activated with 1,1'-carbonyldiimidazole and alkylated with potassium monomethyl malonate in the presence of magnesium chloride in THF at $25-28\,^{\circ}\text{C}$ for 2 h followed by 24 h at $35\,^{\circ}\text{C}$, resulting in the formation of oxopentenoate III. The ketone of III underwent hydride reduction with NaBH4 in THF:methanol (4:1) at -65 °C for 1-2 h followed by hydrolysis with NaOH in methanol at 27-29 $^{\circ}$ C and diastereomeric salt resolution with (R)- α -methylbenzylamine in ethanol to give

hydroxypentenoic acid IV. The salt of IV was recrystd. from acetone:methanol (4:1). The carboxylic acid of IV was activated with 1,1'-carbonyldiimidazole and reacted with potassium monomethyl malonate in the presence of magnesium chloride in THF at $25-28\,^{\circ}\mathrm{C}$ for 2 h followed by 24 h at $30-35\,^{\circ}\mathrm{C}$, resulting in the formation of oxoheptenoate V. Compound V underwent stereoselective reduction with NaBH4 in the presence of diethylmethoxyborane in THF:methanol (4:1) at $-78\,^{\circ}\mathrm{C}$ for 3 h. Hydrolysis of the dihydroxyheptenoate with NaOH followed by treatment with aqueous calcium chloride gave the calcium salt of rosuvastatin (I).

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 50 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
AN
     2006:1010086 CAPLUS
     145:377370
DN
     Process for preparation of Rosuvastatin and its
TI
     calcium salt
IN
     Deshpande, Pandurang Balwant; Ramakrishnan, Arul; Nilesh, Balkrishna
     Shrigadi; Ranjit, Anil Gokhale
     Unichem Laboratories Limited, India
PA
     PCT Int. Appl., 28pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                            KIND
                                    DATE
                                                  APPLICATION NO.
                                                                            DATE
                                    _____
                                                  _____
                            ____
                                                                            _____
     WO 2006100689
                            A1
                                    20060928
                                                 WO 2005-IN266
                                                                            20050809
PΙ
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
               ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
              CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
     IN 2005MU00325
                             Α
                                    20070302
                                                 IN 2005-MU325
                                                                            20050322
                                    20071212
                                               EP 2005-815761
                                                                            20050809
     EP 1863773
                             Α1
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BA,
              HR, YU
PRAI IN 2005-MU325
                                    20050322
     WO 2005-IN266
                             W
                                    20050809
     CASREACT 145:377370
OS
GΙ
```

AB The invention relates to com. viable process for the preparation of Rosuvastatin (I) by an early introduction of the correct absolute stereochem. at C-5 (S) of Rosuvastatin side chain followed by regioselective chain extension using novel side chain building blocks. It

is yet another object of the invention is to provide intermediates that may be used for the preparation of Rosuvastatin. The Rosuvastatin calcium salt is also prepared in this invention.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 51 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
ΑN
     2006:891056 CAPLUS
DN
     145:299533
     Rosuvastatin and salts thereof free of rosuvastatin
TI
     alkyl ether and a process for the preparation thereof
ΙN
     Niddam-Hildesheim, Valerie; Balanov, Anna; Shenkar, Natalia
PA
     Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA,
SO
     PCT Int. Appl., 45 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 5
                           KIND
                                                APPLICATION NO.
     PATENT NO.
                                    DATE
                                                                            DATE
                           ____
                                    _____
                                                 _____
                                                                           ______
                            A2
     WO 2006091770
                                    20060831
                                                WO 2006-US6519
                                                                           20060222
PΤ
                            A3
     WO 2006091770
                                    20070531
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
               VN, YU, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
               CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
               GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
     CA 2591439
                            A1
                                 20060831
                                              CA 2006-2591439
                                                                            20060222
                                    20061116
                                               US 2006-360289
EP 2006-735971
     US 20060258882
                            A1
                                                                            20060222
     EP 1851206
                            Α2
                                    20071107
                                                                            20060222
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
               BA, HR, MK, YU
     JP 2007533764
                            Τ
                                    20071122
                                                 JP 2007-509753
                                                                            20060222
     IN 2007DN05161
                                   20070817
                                                IN 2007-DN5161
                                                                           20070704
                           Α
     KR 2007095414
                                   20070928
                                                KR 2007-718633
                           Α
                                                                           20070814
     CN 101128437
                           Α
                                  20080220
                                                 CN 2006-80005642
                                                                            20070821
PRAI US 2005-655580P P US 2005-676388P P US 2005-723491P P US 2005-723875P P US 2005-732979P P US 2005-751079P P US 2006-760506P P
                                  20050222
                                  20050428
                                  20051003
                                   20051004
                                   20051102
                                   20051215
                           Р
     US 2006-760506P
                                   20060119
                           P
     US 2006-762348P
                                   20060125
     WO 2006-US6519
                            W
                                    20060222
OS
     MARPAT 145:299533
```

AB The present invention provides rosuvastatin and intermediates thereof having a low level of alkylether impurity and processes for the preparation thereof.

- L4 ANSWER 52 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:882914 CAPLUS
- DN 145:293078
- ${\tt TI}$ Process for preparation of rosuvastatin calcium as HMG-CoA reductase inhibitor
- IN Wang, Siqing; Wu, Bin; Xu, Shuxing
- PA Yabang Chemical Group Co., Ltd., Peop. Rep. China; Changzhou Yabang Pharmaceutical Research Institute Co., Ltd.
- SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 12pp. CODEN: CNXXEV
- DT Patent
- LA Chinese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
PΙ	CN 1821242	А	20060823	CN 2006-10007556	20060216		
PRA	I CN 2006-10007556		20060216				

- OS CASREACT 145:293078; MARPAT 145:293078
- AB This invention relates to a method for preparation of rosuvastatin calcium as HMG-CoA reductase inhibitor, which comprises oxidation, coupling, deprotection, and hydrolysis processes.

- L4 ANSWER 53 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:828291 CAPLUS
- DN 146:394762
- TI Results from a rosuvastatin historical cohort study in more than 45 000 dutch statin users, a PHARMO study
- AU Goettsch, W. G.; Heintjes, E. M.; Kastelein, J. J. P.; Rabelink, T. J.; Johansson, Saga; Herings, R. M. C.
- CS PHARMO Institute, Utrecht, Neth.
- SO Pharmacoepidemiology and Drug Safety (2006), 15(7), 435-443 CODEN: PDSAEA; ISSN: 1053-8569
- PB John Wiley & Sons Ltd.
- DT Journal
- LA English
- Purpose: Clin. benefits of statin therapy are accepted, but their safety AΒ profiles have been under scrutiny, particularly for the recently introduced statin, rosuvastatin, relating to serious adverse events involving muscle, kidney and liver. Therefore, a historical cohort study was performed to evaluate the association between rosuvastatin vs. other statin use and the incidence of rhabdomyolysis, myopathy, acute renal failure and hepatic impairment. Methods: Incident users of rosuvastatin or other statins in 2003-2004 and a cohort of patients not prescribed statins were included from the PHARMO database of >2 million Dutch residents. Cases of hospitalizations for myopathy, rhabdomyolysis, acute renal failure or hepatic impairment were identified for these cohorts. Potential cases were validated through a multi-step process using data obtained from hospital records. Addnl., cases of all cause deaths were identified from certification alone. Results: In 2003 and 2004, 10 147 incident rosuvastatin users, 37 396 incident other statin users and 99 935 patients without statin prescriptions were included. There were 26 validated outcome events in the three cohorts including one case each of myopathy (other statin group) and rhabdomyolysis (non-treated group). There were no significant differences in the incidence of outcome events between rosuvastatin and other statin users. Conclusion: This study indicated that the number of outcome events is less than 1 per 3000 person years. This study in more than 45 000 Dutch statin users suggests that rosuvastatin does not lead to an increased incidence of rhabdomyolysis, myopathy, acute renal failure or hepatic impairment compared to other statins.
- RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 54 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2006:735324 CAPLUS
ΑN
DN
     145:188897
     Process for preparation of Rosuvastatin calcium
TI
IN
     Huang, Qingyun
PΑ
     Anhui Qingyun Pharmaceutical and Chemical Co., Ltd., Peop. Rep. China
SO
     PCT Int. Appl., 24 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     Chinese
FAN.CNT 1
     WO 2006076845 A1 0001
     PATENT NO.
                          KIND DATE APPLICATION NO.
                                                _____
                           A1 20060727 WO 2005-CN1958
                                                                         20051118
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
              KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
              MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
              VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
                                               CN 2005-10038203
                       A
                                 20060726
     CN 1807418
                                                                          20050119
US 20080091014 A1 20080417
PRAI CN 2005-10038203 A 20050119
WO 2005-CN1958 W 20061110
                                                US 2007-795123
                                                                          20070711
                           W
     WO 2005-CN1958
                                  20051118
     CASREACT 145:188897
OS
     The present invention discloses a process for synthesis of
AΒ
     Rosuvastatin calcium. The process uses
     4-4'-fluorophenyl-6-isopropyl-2-(N-methyl-N-mesylamino)pyrimidine-5-
     carboxaldehyde as initial material via nitrilation to give
     4-4'-fluorophenyl-6-isopropyl-2-(N-methyl-N-mesylamino)pyrimidine-5-
     propenonitrile, then hydroformylation to obtain 4-4'-fluorophenyl-6-
     isopropyl-2-(N-methyl-N-mesylamino)pyrimidine-5-propenal, after extending
     the side chain, reducing the carbonyl group, hydrolysis acetate group and
     carrying out neutralization or metathetical reaction. The above mentioned
     nitrilation agent is di-Et phosphate acetonitrile or acetonitrile;
     hydroformylation agent is diisobutyl aluminum hydride, red aluminum; the
     ketone-reducing agent is diethylmethoxyborane and NaBH4, KBH4.
RE.CNT 7
               THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
ANSWER 55 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
ΑN
     2006:634801 CAPLUS
     145:103710
DN
     Process for the manufacture of (E)-7-[4-(4-fluorophenyl)-6-
TI
     isopropyl-2-[methyl(methylsulfonyl)amino]pyrimidin-5-yl](3R,5S)-3,5-
     dihydroxyhept-6-enoic acid (rosuvastatin)
ΙN
     Butters, Michael; Lenger, Steven Robert; Murray, Paul Michael; Snape, Evan
     William
     Astrazeneca UK Limited, UK
PA
SO
     PCT Int. Appl., 51 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                         KIND DATE
                                             APPLICATION NO.
     PATENT NO.
                                                                       DATE
                                  _____
                          ____
                                               _____
     WO 2006067456
                          A2
                                  20060629
                                              WO 2005-GB4999
                                                                        20051222
PΙ
                          A3
     WO 2006067456
                                  20060921
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
              VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
              CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
                                                                        20051222
     AU 2005317880
                                  20060629
                                               AU 2005-317880
                           Α1
                                  20060629
     CA 2589775
                           Α1
                                               CA 2005-2589775
                                                                        20051222
     CN 101084197
                                  20071205
                                               CN 2005-80044053
                           Α
                                                                        20051222
     EP 1871747
                           Α2
                                  20080102
                                               EP 2005-820940
                                                                        20051222
             AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR
     JP 2008525407
                           Τ
                                  20080717
                                               JP 2007-547647
                                                                        20051222
     NO 2007002872
                                  20070917
                                               NO 2007-2872
                           Α
                                                                        20070606
     IN 2007DN04373
                           Α
                                  20070824
                                               IN 2007-DN4373
                                                                        20070608
     US 20080207903
                                  20080828
                                               US 2007-793418
                                                                       20070620
                          A1
     MX 200707777
                          А
                                 20070814
                                              MX 2007-7777
                                                                        20070622
                                              KR 2007-717101
                                                                        20070724
     KR 2007092307
                          Α
                                 20070912
                          Α
PRAI GB 2004-28328
                                20041224
                          W
     WO 2005-GB4999
                                  20051222
     MARPAT 145:103710
OS
GΙ
```

Ι

AB The invention relates to a process for preparation of rosuvastatin [I; R = (E)-(3R,5S)-3,5-dihydroxyhept-6-enoic acid residue, R1 = MeSO2NMe] involving reaction of I (R is a leaving group, R1 is MeSO2NMe or a precursor) with a protected 3,5-dihydroxyhept-6-enoic acid derivative or related compound Thus, treatment of N-[5-bromo-4-(4-fluorophenyl)-6-isopropylpyrimidin-2-yl]-N-methylmethanesulfonamide with tert-Bu 2-[(4R,6S)-2,2-dimethyl-6-vinyl-1,3-dioxan-4-yl]acetate in aqueous DMF containing bis(tri-tert-butylphosphine)palladium and N,N-dicyclohexylmethylamine afforded tert-Bu 2-[(4R,6S)-6-[(E)-2-[4-(4-fluorophenyl)-6-isopropyl-2-(N-methylmethanesulfonamido)pyrimidin-5-yl]vinyl]-2,2-dimethyl-1,3-dioxan-4-yl]acetate. The latter was converted into rosuvastatin calcium salt.

L4 ANSWER 56 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:557998 CAPLUS

DN 145:27769

TI A novel process for the preparation of rosuvastatin

IN Kumar, Yatendra; Meeran, Hashim Nizar Poovanathi; De, Shantanu; Rafeeq, Mohammad; Sathyanarayana, Swarqam

PA Ranbaxy Laboratories Limited, India

SO Indian, 18 pp. CODEN: INXXAP

DT Patent

LA English

FAN.CNT 1

11711 • 0111 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI PRAI	IN 192529 IN 2001-DE1229	A1	20040424 20011207	IN 2001-DE1229	20011207
OS GI	CASREACT 145:27769				

AB A process was disclosed for the preparation of rosuvastatin hemicalcium salt I (R = OH, R1 = R2 = H, R3 = CO2-.1/2Ca2+). The process comprised an olefination reaction of (S)- P3P:CHCOCH2CH(OSiMe2CMe3)CH2CN with N-[4-(4-fluorophenyl)-5-formyl-6-(1-methylethyl)-2-pyrimidinyl]-N-methylmethanesulfonamide in an organic solvent at reflux temperature for about 1 to 100 h to form olefin I (RR1 = O, R2 = SiMe2CMe3, R3 = CN), dissolving the olefin in an organic solvent and deprotecting the silyl group with an acid or tetrabutylammonium fluoride to afford the cyanoketo alc. I (RR1 = O, R2 = H, R3 = CN), treating the cyanoketo alc. with a reducing agent in a solvent mixture comprising an alc. and non-alc. organic solvent to get cyanodiol I (R = OH, R1 = R2 = H, R3 = CN), and finally, hydrolyzing the cyanodiol and conversion to the desired carboxylate calcium salt.

Ι

```
ANSWER 57 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2006:541825 CAPLUS
ΑN
     145:342292
DN
     Long-acting preparation of statins
TI
IN
     Zhu, Zuolin; Ye, Hongping; Sun, Meng
     Huaibei City Huike Pharmaceutical Co., Ltd., Peop. Rep. China
PA
SO
     Faming Zhuanli Shenging Gongkai Shuomingshu, 16 pp.
     CODEN: CNXXEV
DT
     Patent
LA
     Chinese
FAN.CNT 1
                         KIND DATE
     PATENT NO.
                                              APPLICATION NO.
                                                                       DATE
                          ____
                                               _____
                       A 20060531 CN 2005-10085860 20050719
A1 20070125 WO 2005-CN1967 20051121
     CN 1778296
PΙ
     WO 2007009320
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
              KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
              MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
              VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
PRAI CN 2005-10085860 A 20050719
     The drug delivery system comprises pressure-sensitive adhesive layer
     containing high mol. polymer of statins, film of dimethicone, drug-storing
     layer, and proofed breathable sarking. The pressure-sensitive adhesive
     layer is high mol. polymer of polyacrylic acids. The drug-storing layer
     contains lanolin, and statin medicine. The statin medicine is lovastatin,
     simvastatin, pravastatin, atorvastatin, rosuvastatin,
     fluvastatin, pitavastatin, huivastatin, and their salt, etc. The preparation
     process comprises (a) preparing blank paste cloth; (b) preparing
     drug-storing paste cloth; and (3) slicing to obtain the product.
```

- L4 ANSWER 58 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:407657 CAPLUS
- DN 145:34075
- TI Medical composition containing amlodipine benzenesulfonate and rosuvastatin calcium, and its preparation
- IN Zhang, Zhenggen; Sun, Haisheng; Xu, Feng; Zhang, Yubin; Yu, Yongfa; Yin, Bixi
- PA Yangtze River Pharmaceutical Group Co., Ltd., Peop. Rep. China
- SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp. CODEN: CNXXEV
- DT Patent
- LA Chinese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	CN 1762361	A	20060426	CN 2005-10094723	20050928
PRAI	CN 2005-10094723		20050928		

AB The medical composition is comprised of amlodipine benzenesulfonate 5-40, rosuvastatin calcium 5-40, and pharmaceutic adjuvant 20-90%. The preparation process consists of grinding amlodipine benzenesulfonate, rosuvastatin calcium and pharmaceutic adjuvant into 60-100 mesh size, preparing soft materials with 5%-20% adhesive solution, pelleting and passing 20-50 mesh, drying at 50-90 °, adding lubricant, mixing, and preparing various formulations. The pharmaceutic adjuvant is lactose, microcryst. cellulose, sodium carboxymethyl starch, povidone K30, and magnesium stearate.

IN 2004-DE1845

WO 2005-IB2784

Α

W

```
ANSWER 59 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2006:316902 CAPLUS
ΑN
DN
     144:376459
     Novel processes for preparing amorphous rosuvastatin calcium and a novel
TI
     polymorphic form of rosuvastatin sodium
IN
     Rafeeq, Mohammad; De, Shantanu; Sathyanarayana, Swarqam; Kumar, Yatendra
PA
     Ranbaxy Laboratories Limited, India
     PCT Int. Appl., 19 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                                                 APPLICATION NO.
     PATENT NO.
                           KIND DATE
                                                                            DATE
                           ____
                                    _____
                                                  _____
     WO 2006035277
                            A2
                                     20060406
                                                  WO 2005-IB2784
                                                                             20050920
PΙ
                            A3 20060803
     WO 2006035277
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
               GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
               YU, ZA, ZM, ZW
          RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
               CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
               GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
                             A2
                                    20070620
                                                                              20050920
     EP 1797046
                                                  EP 2005-797982
             AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
                                     20070831 IN 2007-DN3039
     IN 2007DN03039
                        A
                                                                             20070423
PRAI IN 2004-DE1844
                             Α
                                     20040927
```

AB Provided are processes for preparing amorphous rosuvastatin calcium from crystalline rosuvastatin calcium by simple crystallization processes. Also provided is

20040927

20050920

a novel polymorphic form of rosuvastatin sodium, processes for preparing thereof and pharmaceutical compns. thereof. Crystalline rosuvastatin calcium (20 g) was added to denatured spirit (40 mL) and the resultant mixture was stirred for 10 min at ambient temperature and then heated to about 77° to form produce a clear solution. The clear solution was immediately cooled to about 0° over 10 min. The resultant suspension was stirred at 0° C for 30 min. The separated product was filtered and dried under vacuum at about $40-45^{\circ}$ to yield amorphous rosuvastatin calcium, yield: 1.3 g (65%), HPLC purity:99.72%.

- L4 ANSWER 60 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:300841 CAPLUS
- DN 144:363029
- TI Active Metabolite of Atorvastatin Inhibits Membrane Cholesterol Domain Formation by an Antioxidant Mechanism
- AU Mason, R. Preston; Walter, Mary F.; Day, Charles A.; Jacob, Robert F.
- CS Elucida Research, Beverly, MA, 01915-0091, USA
- SO Journal of Biological Chemistry (2006), 281(14), 9337-9345 CODEN: JBCHA3; ISSN: 0021-9258
- PB American Society for Biochemistry and Molecular Biology
- DT Journal
- LA English
- The advanced atherosclerotic lesion is characterized by the formation of AB microscopic cholesterol crystals that contribute to mechanisms of inflammation and apoptotic cell death. These crystals develop from membrane cholesterol domains, a process that is accelerated under conditions of hyperlipidemia and oxidative stress. In this study, the comparative effects of hydroxymethylglutaryl-CoA (${\tt HMG-CoA}$) reductase inhibitors (statins) on oxidative stress-induced cholesterol domain formation were tested in model membranes containing physiol. levels of cholesterol using small angle x-ray diffraction approaches. In the absence of HMG-CoA reductase, only the atorvastatin active o-hydroxy metabolite (ATM) blocked membrane cholesterol domain formation as a function of oxidative stress. This effect of ATM is attributed to electron donation and proton stabilization mechanisms associated with its phenoxy group located in the membrane hydrocarbon core. ATM inhibited lipid peroxidn. in human low d. lipoprotein and phospholipid vesicles in a dose-dependent manner, unlike its parent and other statins (pravastatin, rosuvastatin, simvastatin). These findings indicate an atheroprotective effect of ATM on membrane lipid organization through a potent antioxidant mechanism.
- RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 61 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2006:168208 CAPLUS
ΑN
DN
     144:233196
     Process for preparation of chiral cyclic arylboronate esters by
TΙ
     esterification of 3,5-dihydroxycarboxylates with arylboronic acids
IN
     Puthiaparampil, Tom Thomas; Srinath, Sumithra; Sridharan, Madhavan;
     Ganesh, Sambasivam
PA
     U.S. Pat. Appl. Publ., 22 pp.
SO
     CODEN: USXXCO
DT
     Patent
LA
     English
FAN.CNT 2
                        KIND
                                 DATE
                                            APPLICATION NO.
     PATENT NO.
                                                                      DATE
                                 _____
                         ____
                                              _____
                                                                      _____
                                             US 2004-923934
     US 20060040898
                         A1
                                 20060223
                                                                     20040823
PΙ
     US 7238826
                         В2
                          B2 20070703
A1 20030828
     WO 2003070733
                                             WO 2002-IN32
                                                                      20020225
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
             VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
             GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
             GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 20050154213 A1 20050714 US 2004-505528
                                                                      20040823
                          В2
                              20071127
     US 7301046
PRAI WO 2002-IN32
                          W
                                 20020225
     US 2004-505528
                          A2
                                 20040823
     CASREACT 144:233196; MARPAT 144:233196
OS
AΒ
     Chiral optically active cyclic boronates, 2-Ar-6-XCH2-1,3,2-dioxaborinane-
     4-R3-acetates [Ar = (un)substituted C6-10 (hetero)aryl, R3 = (un)branched
     C1-8 alkyl, C6-10 aryl, aralkyl; X = OH, protected hydroxy, halo, CN] and
     aldehydoester derivs. 2-Ar-6-(OHC)-1,3,2-dioxaborinane-4-R3-acetates (same
     Ar, R3), useful as intermediates for the synthesis of anti-
     hypercholesterolemia HMG-CoA enzyme inhibitors such as atorvastatin,
     cerivastatin, rosuvastatin, pitavastatin, and fluvastatin (no
     data) were prepared by improved process comprising Claisen
     condensation of protected 3,4-dihydroxybutyrate with MeCO2tBu, followed by
     reduction of the ketoester to 6-trityloxy 3,5-dihydroxyhexanoate,
     esterification with ArB(OH)2 and deprotection of the exocyclic
     hydroxy-group; thus obtained 6-hydroxymethyl 2-Ar-1,3,2-dioxaborinane-4-R3-
     acetates were converted to the corresponding 6-halomethyl, 6-cyanomethyl
     and 6-formyl derivs. by substitution and oxidation reactions. In an example,
     Me (3S)-4-trityloxy-3-hydroxybutyrate was converted to tert-Bu
     (5S)-5-hydroxy-3-oxo-6-(trityloxy)hexanoate by LDA-initiated condensation
     with tert-Bu acetate; stereoselective reduction of the product by
     methoxydiethylborane yielded tert-Bu (3R,5S)-3,5-dihydroxy-6-
     (trityloxy)hexanoate (3). In another example, the dihydroxy-derivative 3 was
     esterified by ArB(OH)2 to give after deprotection the hydroxymethyl
     derivs. tert-Bu (4R,5S)-2-Ar-6-HOCH2-1,3,2-dioxaborinane-4-acetates (Ar =
     Ph, 1-naphthalenyl, 4-MeOC6H4, 8-quinolinyl, 3-NO2C6H4, 2,6-F2C6H3); the
     phenylboronic derivative was converted to 6-cyanomethyl- and
     6-formyl-substituted (4R,5S)-2-Ar-1,3,2-dioxaborinane-4-acetates.
```

```
ANSWER 62 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
AN
     2006:149308 CAPLUS
     144:232853
DN
     A process for the preparation of rosuvastatin
TI
     involving a TEMPO-mediated oxidation step
ΙN
     Niddam-Hildesheim, Valerie; Chen, Kobi
PA
     Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA,
     PCT Int. Appl., 25 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                                               APPLICATION NO.
     PATENT NO.
                           KIND
                                  DATE
                                                                         DATE
                                  _____
                                               _____
                           ____
                                                                         _____
     WO 2006017357
                                  20060216
                                              WO 2005-US24983
                                                                         20050713
PΙ
                           A1
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
              ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
              CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM
     CA 2573857
                                  20060216
                                               CA 2005-2573857
                           Α1
                                                                         20050713
                                               US 2005-181968
     US 20060089501
                            Α1
                                   20060427
                                                                         20050713
     US 7179916
                                  20070220
                            В2
                                               EP 2005-771256
     EP 1673351
                                  20060628
                                                                         20050713
                            Α1
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
         R:
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
              BA, HR, IS, YU
     JP 2007508379
                            Τ
                                   20070405
                                                JP 2006-535473
                                                                         20050713
     IN 2007DN00041
                                  20070427
                                               IN 2007-DN41
                                                                         20070102
                            Α
     KR 2007030948
                                  20070316
                                               KR 2007-702743
                            Α
                                                                         20070202
     US 20070142418
                            A1
                                  20070621
                                               US 2007-704046
                                                                         20070207
PRAI US 2004-587653P
                            Ρ
                                  20040713
     US 2005-181968
                            Α1
                                  20050713
     WO 2005-US24983
                            W
                                  20050713
     CASREACT 144:232853
OS
GΙ
```

- AB This invention provides a process for the preparation of the rosuvastatin intermediate I (R = CHO) by TEMPO-mediated oxidation of the corresponding alc. I (R = CH2OH), and its subsequent conversion to rosuvastatin II (R1 = H) and pharmaceutically acceptable salts thereof, such as II (R1 = Na, 1/2Ca).
- RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 63 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:86301 CAPLUS
- DN 144:267040
- TI Effect of rosuvastatin on hepatic production of apolipoprotein B-containing lipoproteins in an animal model of insulin resistance and metabolic dyslipidemia
- AU Chong, Taryne; Naples, Mark; Federico, Lisa; Taylor, Denise; Smith, Graham J.; Cheung, Raphael C.; Adeli, Khosrow
- CS Division of Clinical Biochemistry, Research Institute, Hospital for Sick Children & Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, ON, M5G 1X8, Can.
- SO Atherosclerosis (Amsterdam, Netherlands) (2006), 185(1), 21-31 CODEN: ATHSBL; ISSN: 0021-9150
- PB Elsevier B.V.
- DT Journal
- LA English
- AΒ A novel animal model of insulin resistance, the fructose-fed Syrian golden hamster, was employed to investigate the efficacy and mechanisms of action of rosuvastatin, a HMG-CoA reductase inhibitor, in ameliorating metabolic dyslipidemia in insulin-resistant states. Fructose feeding for a 2-wk period induced insulin resistance and a significant increase in hepatic secretion of VLDL. This was followed by a fructose-enriched diet with or without 10 mg/kg rosuvastatin for 14 days. Fructose feeding in the first 2 wk caused a significant increase in plasma total cholesterol and triglyceride in both groups (n = 6, p < 0.001). However, there was a significant decline (30%, n = 8, p < 0.05) in plasma triglyceride levels following rosuvastatin feeding (10 mg/kg). A significant decrease (n = 6, p < 0.05) was also observed in VLDL-apoB production in hepatocytes isolated from drug-treated hamsters, together with an increased apoB degradation (n = 6, p < 0.05). Similar results were obtained in parallel cell culture expts. in which primary hepatocytes were first isolated from chow-fed hamsters, and then treated in vitro with 15 μM rosuvastatin for 18 h. Rosuvastatin at 5 μM caused a substantial reduction in synthesis of unesterified cholesterol and cholesterol ester (98 and 25%, n = 9, p < 0.01 or p < 0.05) and secretion of newly synthesized unesterified cholesterol, cholesterol ester, and triglyceride (95, 42, and 60% reduction, resp., n = 9, p < 0.01 or p < 0.05). This concentration of rosuvastatin also caused a significant reduction (75% decrease, n = 4, p < 0.01) in the extracellular secretion of VLDL-apoB100, accompanied by a significant increase in the intracellular degradation of apoB100. There was a 12% reduction (not significant, p > 0.05) in hepatic MTP and no changes in ER-60 (a chaperone involved in apoB degradation) protein levels. Taken together, these data suggest that the assembly and secretion of VLDL particles in hamster hepatocytes can be acutely inhibited by rosuvastatin in a process involving enhanced apoB degradation This appears to lead to a significant amelioration of hepatic VLDL-apoB overprodn. observed in the fructose-fed, insulin-resistant hamster model.
- RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 64 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2006:13869 CAPLUS
- DN 144:108142
- TI Chemoselective catalytic oxidative processes to produce aldehyde group-containing intermediates for rosuvastatin preparation
- IN Gudipati, Srinivasulu; Katkam, Srinivas; Sagyam, Rajeshwar Reddy; Kudavalli, Java Satyanaraya
- PA Dr. Reddy's Laboratories Limited, India; Dr. Reddy's Laboratories, Inc.
- SO U.S. Pat. Appl. Publ., 4 pp. CODEN: USXXCO
- DT Patent
- LA English
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 20060004200	A1	20060105	US 2005-157552	20050621
	US 7161004	В2	20070109		
PRAI	US 2004-581480P	P	20040621		

- OS CASREACT 144:108142
- AB Intermediate compds. [e.g., tert-Bu 2-[(4R,6S)-6-formyl-2,2-dimethyl-1,3-dioxan-4-yl]acetate] for preparing rosuvastatin are prepared by a process comprising chemoselectively oxidizing hydroxymethyl groups [e.g., tert-Bu (4R-cis)-6-(hydroxymethyl)-2,2-dimethyl-1,3-dioxane-4-acetate] into aldehyde groups using sodium hypochlorite as the oxidant and 2,2,6,6-tetramethylpiperidinyloxy free radical as a catalyst.
- RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 65 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2005:1075781 CAPLUS
ΑN
DN
      143:367145
      Process and intermediate compounds useful in the preparation of
TΙ
      statins, particularly rosuvastatin
IN
      Moody, David John; Wiffen, Jonathan William
PA
      Avecia Pharmaceuticals Limited, UK
      PCT Int. Appl., 16 pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
                                                 APPLICATION NO.
      PATENT NO.
                             KIND DATE
                                                                                   DATE
                              ____
                                                       _____
      WO 2005092867
                               A2 20051006
                                                      WO 2005-GB1099
                                                                                    20050323
PΙ
                           A3 20051110
      WO 2005092867
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
           CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                MR, NE, SN, TD, TG
                                                    AU 2005-225602
                          A1
                                                                                     20050323
      AU 2005225602
                                        20051006
                                                    CA 2005-2561059
EP 2005-731809
      CA 2561059
                                A1
                                        20051006
                                                                                     20050323
                               A1 20051006
A2 20061213
      EP 1729775
                                                                                     20050323
           R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
                IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA,
                HR, LV, MK, YU
      BR 2005007999 A
                                        20070731
                                                       BR 2005-7999
                                                                                     20050323
      CN 101022807
                                        20070822
                                                      CN 2005-80009682
                                                                                     20050323
      JP 2007530521
                               Τ
                                        20071101
                                                      JP 2007-504474
                                                                                     20050323
      EP 1958633
                               Α2
                                        20080820
                                                       EP 2008-157487
      EP 1958633
                               А3
                                        20080827
           R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
                IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA,
                HR, LV, MK, YU
      IN 2006KN03061
                               Α
                                        20070608
                                                      IN 2006-KN3061 20061023
PRAI GB 2004-6757
                                Α
                                        20040326
      EP 2005-731809
                                        20050323
                                Α3
                              W
      WO 2005-GB1099
                                        20050323
      CASREACT 143:367145; MARPAT 143:367145
OS
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB A process for preparing I [R1 = alkyl; R2 = aryl; R3 = H, alkyl, or protecting group; R4 = H, protecting group, SO2R5, where R5 = alkyl] and intermediates thereof are disclosed. Hydroxylation of II [Y = halo; W = (=0) or OP2; P1 and P2 independently = H or protecting group] followed by oxidation provides III; coupling of III with IV [R6 = (PR7R8)+X- or P(=0)R7R8 in which X is an anion and R7 and R8 independently = alkyl, aryl, alkoxy or aryloxy] followed by oxidation provides V. V undergoes ring opening with

optional removal of O-protecting groups to give I.

```
ANSWER 66 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2005:902867 CAPLUS
ΑN
     143:229878
DN
     Preparation of amorphous salts of rosuvastatin
TI
IN
     Kumar, Yatendra; Rafeeq, Mohammad; De, Shantanu; Sathyanarayana, Swarqam
PA
     Ranbaxy Laboratories Limited, India
SO
     PCT Int. Appl., 46 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                           KIND DATE
     PATENT NO.
                                                  APPLICATION NO.
                            ----
                                                  _____
     WO 2005077917
                            A1 20050825 WO 2005-IB132
                                                                             20050119
PΙ
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
               GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
               LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
          NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
               MR, NE, SN, TD, TG
     EP 1737828
                             A1
                                  20070103
                                                EP 2005-702294
                                                                              20050119
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
     IN 2006DN04805 A 20070831
                                                 IN 2006-DN4805
PRAI IN 2004-DE77
                              Α
                                     20040119
                                     20050119
     WO 2005-IB132
                             W
     An amorphous crystalline form of rosuvastatin magnesium is described
AΒ
     as is a process for its preparation from crystalline rosuvastatin
     magnesium, rosuvastatin Me ammonium salt, and from
     rosuvastatin lactone is described.
RE.CNT 7
               THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
ANSWER 67 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
     2005:673108 CAPLUS
ΑN
     143:159611
DN
     Pharmaceutical compositions comprising higher primary aliphatic alcohols
TΙ
     and HMG CoA reductase inhibitor and process of preparation thereof
IN
     Jindal, Kour Chand; Singh, Sukhjeet; Jain, Rajesh
PA
     Panacea Biotec Ltd., India
     PCT Int. Appl., 30 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                        KIND DATE APPLICATION NO.
     PATENT NO.
                        ----
                                            _____
     WO 2005067921
                         A1 20050728 WO 2005-IN24
                                                                    20050119
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TD, TG
             MR, NE, SN, TD, TG
                                           IN 2004-DE99
                     A
                                20060210
     IN 2004DE00099
                                                                     20040120
                         A1
     AU 2005205165
                                 20050728
                                          AU 2005-205165
                                                                     20050119
                         В2
     AU 2005205165
                                 20080424
                                            CA 2005-2553988
                         A1
                                 20050728
     CA 2553988
                                                                     20050119
                                            EP 2005-709165
     EP 1755587
                         A1
                                20070228
                                                                     20050119
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
     MX 2006PA09500
                         A
                                 20061107
                                          MX 2006-PA9500
                                                                    20060818
PRAI IN 2004-DE99
                          Α
                                 20040120
     WO 2005-IN24
                          W
                                 20050119
     A novel pharmaceutical composition comprising a mixture of higher primary
aliphatic
     alcs. from (24) to (39) carbon atoms; at least one other component
     selected from resins and pigments, hydrocarbons, esters, ketones and
     aldehydes, and phenolic compds., and HMG CoA reductase inhibitor, its
     salts, analogs or derivs. thereof, preferably statins, optionally with
     pharmaceutically acceptable excipients, and process of preparation of such
     composition is provided. Also provided are a method of treatment and use of
     such composition for reducing abnormal lipid parameters associated with
     hyperlipidemia.
```

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 68 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2005:651086 CAPLUS

DN 143:235374

TI Rosuvastatin dispersion tablet and its preparation method

IN Yang, Xihong

PA Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 CN 1557319 CN 2004-10004908	А	20041229 20040209	CN 2004-10004908	20040209

AB The Rosuvastatin dispersing tablet consists of Rosuvastatin in 0.1-45%, preferably 5-20%, and medicinal supplementary material in 55-99.9%, preferably 80-95%. The medicinal supplementary material includes disintegrating agent, stuffing, wetting adhesive and wetting agent, and the dispersing tablet is prepared through wet pelletizing and tableting process. The Rosuvastatin dispersing tablet has the advantages of high disintegrating speed, convenience in taking, high acting speed, high bioavailability and thus high curative effect.

```
ANSWER 69 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
ΑN
      2005:612271 CAPLUS
      143:115390
DN
      Process for preparation of statins with high syn to anti ratio
TI
IN
      Lifshitz-Liron, Revital; Perlman, Nurit
PA
      Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA,
      PCT Int. Appl., 23 pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 2
                              KIND
                                                       APPLICATION NO.
      PATENT NO.
                                         DATE
                                                                                      DATE
                               ____
                                         _____
                                                        _____
      _____
                                A2
                                         20050714
                                                        WO 2004-US43466
                                                                                       20041223
      WO 2005063728
PΙ
                               A3
      WO 2005063728
                                         20060223
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
           LK, LK, LS, L1, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, N1, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, DO, SE, SI, SK, TD, BE, BI, CF, CG, CI, CM, GA, GN, GO, GW, MI
                 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
                MR, NE, SN, TD, TG
                                                        CA 2004-2550742
      CA 2550742
                                         20050714
                                 A 1
                                                                                       20041223
      EP 1697338
                                 Α2
                                         20060906
                                                       EP 2004-815531
                                                                                       20041223
               AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
                 BA, HR, IS, YU
      JP 2007520464
                                         20070726
                                                        JP 2006-545612
                                                                                       20041223
                                 Τ
      JP 4037900
                                 В2
                                         20080123
      TW 258370
                                 В
                                         20060721
                                                        TW 2004-93140548
                                                                                       20041224
      IN 2006DN02856
                                         20070810
                                                        IN 2006-DN2856
                                                                                       20060519
                                 Α
      JP 2008031168
                                         20080214
                                                        JP 2007-191419
                                                                                       20070723
                                 Α
PRAI US 2003-532458P
                                 Ρ
                                        20031224
      US 2004-547715P
                                 Ρ
                                         20040224
      JP 2006-545612
                                 А3
                                         20041223
      WO 2004-US43466
                               W
                                         20041223
      CASREACT 143:115390; MARPAT 143:115390
OS
GΙ
```

$$R^2$$
 R^4 CO_2R^1 R^4 R^4

Ι

RCH(Y)CH(OH)CH2COCH2CO2R1 [R = organic radical that is inert to redn and allows for inhibition of 3-hydroxy-3-methylglutaryl CoA; Y = H or forms a double bond with the R group; R1 = alkyl] and purification of the corresponding syn-diol esters syn-RCH(Y)CH(OH)CH2CH(OH)CH2CO2R1 of the statins via selective crystallization Thus, β -keto ester I (R1 = CMe3, R2 = OH, R3R4 = O) was reduced using 9-methoxy-9-borabicyclo[3.3.1]nonane and sodium borohydride in methanol at -70° for 2 h followed by treatment with 30% H2O2 soln to give syn-diol ester I (R1 = CMe3, R2 = R3 = β -OH, R4 = α -H) in 73% yield and 99.0:0.45 d.e. The syn-diol ester was further purified by crystallization and subsequently treated with 47% NaOH to

form

fluvastatin sodium salt I (R1 = Na, R2 = R3 = $\beta\text{-OH},$ R4 = $\alpha\text{-H})$ in 87% yield.

```
ANSWER 70 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
       2005:497491 CAPLUS
ΑN
       143:26633
DN
       An improved process for preparation of rosuvastatin
TΙ
       derivatives, useful as HMG-CoA inhibitor
IN
       Joshi, Narendra; Bhirud, Shekhar Bhaskar; Chandrasekhar, Batchu; Rao, K.
       Eswara; Damle, Subhash
       Glenmark Pharmaceuticals Limited, India
PA
       U.S. Pat. Appl. Publ., 15 pp.
       CODEN: USXXCO
DT
       Patent
LA
       English
FAN.CNT 1
                                    KIND DATE
                                                                 APPLICATION NO.
       PATENT NO.
                                                                                                        DATE
                                                _____
                                    ____
                                                                   _____
                                                                                                       _____
                                                                  US 2004-4755
       US 20050124639
                                      A1
                                                 20050609
                                                                                                       20041203
PΙ
       US 7312329
                                      В2
                                                 20071225
                                A 20060505 IN 2003-MU1244
A1 20050616 WO 2004-IB3962
       IN 2003MU01244
                                                                                                       20031204
       WO 2005054207
                                                                                                        20041202
             W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, BU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK
                   AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
                    MR, NE, SN, TD, TG
PRAI IN 2003-MU1244
                                  A
                                                 20031204
                                      Р
       US 2004-561732P
                                                 20040413
       IN 2004-MU442
                                      А3
                                                 20040413
OS
       CASREACT 143:26633; MARPAT 143:26633
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB The invention relates to a preparation of rosuvastatin derivs. of formula I [wherein: R1 is alkyl, aryl, or arylalkyl; R2 and R3 are independently H or hydrocarbon; R4 is H, alkyl, or a cation capable of forming a non-toxic pharmaceutically acceptable salt; each R5 are independently H or a protecting group, etc.; Z is S, O, sulfonyl, or imino, etc.] from a Wittig reagent of formula II•X- (R is alkyl, aryl, or arylalkyl; , X- is a halogen) and aldehyde of formula III. No biol. data was reported. For instance, rosuvastatin derivative IV was prepared via Wittig reaction from aldehyde V and ylide VI with a yield of 88-90%.
- RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 71 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2005:493592 CAPLUS
ΑN
      143:32342
DN
      Preparation and purification of crystalline rosuvastatin ammonium salts
TΙ
      and rosuvastatin calcium
IN
      Niddam-Hildesheim, Valerie; Aronhime, Judith
PA
      Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA,
SO
      PCT Int. Appl., 28 pp.
      CODEN: PIXXD2
DT
      Patent
LA
      English
FAN.CNT 1
                             KIND DATE
                                                     APPLICATION NO.
      PATENT NO.
                                                                                   DATE
                             ____
                                                      _____
                                                                                  _____
      WO 2005051921
                              A1 20050609 WO 2004-US39469
                                                                                  20041124
PΤ
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
           GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, RE, RG, RF, RR, RZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, CT, CT, CK, TD, RE, RI, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR,
                SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
                NE, SN, TD, TG
      CA 2546701
                               A1
                                        20050609
                                                      CA 2004-2546701
                                                                                    20041124
                               A1
      US 20050131066
                                        20050616
                                                       US 2004-996483
                                                                                    20041124
                                       20051207
                                                    EP 2004-812066
      EP 1601658
                               Α1
                                                                                    20041124
           R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
                HR, IS, YU
      CN 1906175
                              Α
                                        20070131
                                                       CN 2004-80040800
                                                                                    20041124
                                                       IN 2006-DN2567
      IN 2006DN02567
                              Α
                                       20070810
                                                                                    20060508
PRAI US 2003-525128P
                              Ρ
                                       20031124
      US 2004-534479P
                              Ρ
                                       20040105
      WO 2004-US39469
                              W
                                       20041124
AΒ
      Provided are alkyl ammonium crystalline salts of rosuvastatin that
      provide for purification of rosuvastatin and its pharmaceutically
```

AB Provided are alkyl ammonium crystalline salts of rosuvastatin that provide for purification of rosuvastatin and its pharmaceutically acceptable salts. A process for purifying rosuvastatin calcium includes (a) converting rosuvastatin calcium salt to rosuvastatin acid; (b) converting rosuvastatin acid to rosuvastatin isopropylammonium salt; (c) converting the isopropylammonium salt to rosuvastatin calcium.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 72 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
       2005:409510 CAPLUS
ΑN
      142:463747
DN
      Process for the manufacture of the calcium salt of
TΙ
       rosuvastatin (E)-7-[4-(4-fluorophenyl)-6-isopropyl-2-
       [methyl(methylsulfonyl)amino]pyrimidin-5-yl](3R,5S)-3,5-dihydroxyhept-6-
       enoic acid and their crystalline intermediates
       Okada, Tetsuo; Horbury, John; Laffan, David Dermot Patrick
IN
      Astrazeneca Uk Limited, UK; Shionogi & Company Limited
PA
SO
       PCT Int. Appl., 42 pp.
       CODEN: PIXXD2
DT
       Patent
      English
LA
FAN.CNT 1
                                KIND DATE APPLICATION NO.
       PATENT NO.
                                                                                           DATE
                                ____
                                           _____
                                                            ______
       WO 2005042522
                                  A1 20050512 WO 2004-GB4481
                                                                                           20041022
PΤ
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE,
                  SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
                  SN, TD, TG
       AU 2004285750
                                   Α1
                                            20050512
                                                            AU 2004-285750
                                                                                             20041022
                                   В2
                                            20080313
       AU 2004285750
                                                           CA 2004-2543358
       CA 2543358
                                   Α1
                                            20050512
                                                                                             20041022
                                            20060726
                                                           EP 2004-768997
       EP 1682536
                                   Α1
                                                                                             20041022
            R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                  IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
       BR 2004015681
                                Α
                                          20061219
                                                           BR 2004-15681
                                                                                            20041022
       CN 1898233
                                  Α
                                           20070117
                                                             CN 2004-80038296
                                                                                             20041022
       JP 2007509119
                                  T
                                           20070412
                                                            JP 2006-536173
                                                                                            20041022
                                 A 20070615 IN 2006-DN2189
A 20061110 MX 2006-PA4553
A 20060519 NO 2006-2263
A1 20071101 US 2007-576774
       IN 2006DN02189
                                                                                            20060421
      MX 2006PA04553
                                                                                            20060424
      NO 2006002263
                                                                                            20060519
       US 20070255060
                                                                                            20070316
      JP 2008024712 A 20080207 JP 2007-228620

JP 2008044948 A 20080228 JP 2007-228621

GB 2003-24791 A 20031024

JP 2006-536173 A3 20041022

WO 2004-GB4481 W 20041022
                                                                                            20070904
                                                           JP 2007-228621
                                                                                           20070904
PRAI GB 2003-24791
      MARPAT 142:463747
OS
GΙ
```

^{*} STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for the manufacture of the calcium salt of (E)-7-[4-(4-fluorophenyl)-6-isopropyl-2-[methyl(methylsulfonyl)amino]pyrim idin-5-yl](3R,5S)-3,5-dihydroxyhept-6-enoic acid (rosuvastatin), useful as an HMGCoA reductase inhibitor, from a compound of the formula I (A is an acetal or ketal protecting group, R is alkyl), via isolated crystalline compds. of the formula II (R1 = R, H, metal) and III is described. Crystalline

intermediates of formulas I-III are also described.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 73 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T.4
    2005:238963 CAPLUS
ΑN
    142:303754
DN
    Process for preparation of rosuvastatin calcium
TΙ
IN
    Niddam-Hildesheim, Valerie; Sterimbaum, Greta
PA
    Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals USA,
    PCT Int. Appl., 24 pp.
SO
    CODEN: PIXXD2
DT
    Patent
    English
LA
FAN.CNT 1
                                        APPLICATION NO.
    PATENT NO.
                      KIND DATE
                                                              DATE
                      ____
                              _____
                                         _____
    WO 2005023778
                       A2
                              20050317
                                        WO 2004-US27530
                                                               20040824
PΙ
                       A3 20050616
    WO 2005023778
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
        SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
            SN, TD, TG
    CA 2537271
                              20050317
                                       CA 2004-2537271
                                                               20040824
                        Α1
    US 20050080134
                       A1
                              20050414
                                        US 2004-925430
                                                               20040824
    US 7396927
                        В2
                              20080708
    EP 1562912
                        Α2
                              20050817
                                        EP 2004-782093
                                                               20040824
           AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
    CN 1875008
                        Α
                              20061206
                                       CN 2004-80024487
                                                               20040824
                                         EP 2007-107845
    EP 1816126
                        Α1
                              20070808
                                                               20040824
        R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
    IN 2006DN00658
                    A
                            20070831
                                         IN 2006-DN658
                                                               20060208
PRAI US 2003-498764P
                       Р
                              20030828
    US 2004-534678P
                       Р
                             20040106
    EP 2004-782093
                       А3
                             20040824
                    W
    WO 2004-US27530
                              20040824
    The present invention provides processes for preparing calcium salts of
AB
    statin, particularly rosuvastatin calcium salt substantially free of
    impurities on an industrial scale. For example, to a suspension of 10 g
    of tert-butylrosuvastatin in 100 mL of EtOH, 1.5 equiv (27.93 mL) of 1N
    NaOH was added at ambient temperature, and the mixture was stirred for 1 h to
    obtain clear solution  The reaction mixture was concentrated under reduced
    to obtain a residue (17.79 g) that contained the sodium salt. To this
    residue was added 100 mL of water, the aqueous phase was washed with EtOAc,
    traces of EtOAc in the aqueous phase were distilled off under reduced pressure
at
    60°, and CaCl2 1N (20 mL) was added dropwise resulting in precipitation of
    the calcium salt. The reaction mixture was then stirred at 15\,^{\circ} for 2\,
    h, filtered and washed with water to get a powdery compound (8.0 \text{ g, } 86\%).
```

AU 2003269478 IN 2003CN01347

PRAI WO 2003-IN288

```
ANSWER 74 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
         2005:216802 CAPLUS
ΑN
DN
        142:285214
         Process for the preparation of amorphous rosuvastatin
TΙ
IN
         Parthasaradhi, Reddy Bandi; Rathnakar, Reddy Kura; Raji, Reddy Rapolu;
        Muralidhara, Reddy Dasari
         Hetero Drugs Limited, India
PA
         PCT Int. Appl., 8 pp.
        CODEN: PIXXD2
DT
        Patent
LA
        English
FAN.CNT 1
                                          KIND DATE
                                                                            APPLICATION NO.
         PATENT NO.
                                                                                                                      DATE
                                          ____
         _____
                                                                             _____
                                                                                                                     _____
        WO 2005021511
                                            A1 20050310 WO 2003-IN288
                                                                                                                      20030827
PΙ
               W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 2003269478

A1 20050316

AU 2003-269478
               W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
```

The present invention provides a novel process for the preparation of amorphous rosuvastatin calcium. Rosuvastatin calcium was dissolved in EtOH and the solution was subjected to vacuum drying at 55° for 10 h to give the amorphous form.

20051125

20030827

A1 20050316 AU 2003-269478 20030827

IN 2003-CN1347

20030827

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

Α

Α

```
ANSWER 75 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
ΑN
     2005:120911 CAPLUS
     142:197756
DN
ΤI
     Lactonization process for the production of statin lactones
ΙN
     Chandrapa, Ravindra; Poornaprajna, Achraya; Ganesh, Sambasivam
PΑ
     Biocon Limited, India
SO
     PCT Int. Appl., 15 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                          KIND DATE
     PATENT NO.
                                               APPLICATION NO.
                           ____
     WO 2005012279
                           A1 20050210 WO 2003-IN264
                                                                           20030804
PΙ
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
              GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
              PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
              UG, US, UZ, VN, YU, ZA, ZM, ZW
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                      A1 20050215
A 20030804
     AU 2003263579
                                               AU 2003-263579 20030804
PRAI WO 2003-IN264
   CASREACT 142:197756; MARPAT 142:197756
GΙ
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB A process for preparation of lactone statins I [G = (un)substituted alkyl, aryl, heteroaryl] comprises reacting a statin acid or salt II [X = H, metal, amine] with sulfuric acid, where the sulfuric acid is added in one portion, at less than 0.8 equiv of the statin salt or acid, at less than -15° for <1 h in a water-miscible solvent (e.g., acetonitrile). Thus, simvastatin (III) was prepared from simvastatin ammonium salt (IV·+NH4) in MeCN containing butylated hydroxanisole to which H2SO4 was added.
- RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 76 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
ΑN
        2004:1037079 CAPLUS
        142:23301
DN
        Process for the preparation of pyrimidine derivatives
TI
IN
        End, Nicole; Richter, Yvonne
PA
        Ciba Specialty Chemicals Holding Inc., Switz.
SO
        PCT Int. Appl., 36 pp.
        CODEN: PIXXD2
DT
        Patent
LA
        English
FAN.CNT 1
        PATENT NO.
                                        KIND
                                                    DATE
                                                                       APPLICATION NO.
                                                                                                             DATE
                                        ____
                                                    _____
        WO 2004103977
                                         A2
                                                    20041202
                                                                       WO 2004-EP50762
                                                                                                             20040512
PΙ
        WO 2004103977
                                         А3
                                                    20050106
              W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                     CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                     GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                     SN, TD, TG
PRAI EP 2003-405355
                                         Α
                                                    20030521
       MARPAT 142:23301
OS
GΙ
```

$$R^4$$

$$OY^1 OY^2 O$$

$$R^3 S N N R^1$$

$$R^4 I$$

AB There is described a process for the preparation of compds. of formula (I) [R1, R2, R3 = (un)substituted organic radical; R4 = H each

(un) substituted C1-8 alkyl, C1-8 alkoxy, phenoxy, or benzyloxy, halogen; Y1, Y2 = H, protecting group, or Y1 and Y2 together are a protecting bridge; X1 = H, organic radical or cation] starting from the reaction of the compds. of formulas (II), R1COCH2CO2R6 [R1, R6 = (un) substituted organic radical], and thiourea to form the compound of formula (III) (R1, R4, R6 = same as above) and also novel intermediates. Thus, Me isobutyrylacetate (21.6 g, 0.15 mol), thiourea (14.9 g, 0.2 mol), lanthanum chloride heptahydrate (21.5 g, 75 mmol) and 37% aqueous (1 mL) were added to a solution

of

p-fluorobenzaldehyde (18.6 g, 0.15 mol) in 300 mL ethanol. The reaction mixture was refluxed for 16 h and then poured into 500 mL hot water, cooled to 0° to give, after filtering the product precipitated out in the form of a colorless powder, washing with H2O, and drying in a drying oven at 50° , 41.5 g 4-(4-fluorophenyl)-6-isopropyl-2-thioxo-1,2,3,4-tetrahydropyrimidine-5-carboxylic acid Me ester (IV) (90 %). IV was converted into Rosuvastatin in many steps.

- L4 ANSWER 77 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2004:627391 CAPLUS
- DN 142:68474
- TI Rosuvastatin pharmacokinetics in heart transplant recipients administered an antirejection regimen including cyclosporine
- AU Simonson, Steven G.; Raza, Ali; Martin, Paul D.; Mitchell, Patrick D.; Jarcho, John A.; Brown, Colin D. A.; Windass, Amy S.; Schneck, Dennis W.
- CS AstraZeneca, Wilmington, DE, USA
- SO Clinical Pharmacology & Therapeutics (St. Louis, MO, United States) (2004), 76(2), 167-177 CODEN: CLPTAT; ISSN: 0009-9236
- PB Elsevier Inc.
- DT Journal
- LA English
- Background: Cyclosporine (INN, ciclosporin) increases the systemic AΒ exposure of all statins. Therefore rosuvastatin pharmacokinetic parameters were assessed in an open-label trial involving stable heart transplant recipients (≥6 mo after transplant) on an antirejection regimen including cyclosporine. Rosuvastatin has been shown to be a substrate for the human liver transporter organic anion transporting polypeptide C (OATP-C). Inhibition of this transporter could increase plasma concns. of rosuvastatin. Therefore the effect of cyclosporine on rosuvastatin uptake by cells expressing OATP-C was also examined Methods: Ten subjects were assessed while taking 10 mg rosuvastatin for 10 days; 5 of these were then assessed while taking 20 mg rosuvastatin for 10 days. Rosuvastatin steady-state area under the plasma concentration-time curve from time 0 to 24 h [AUC(0-24)] and maximum observed plasma concentration (Cmax) were compared with values
 - in controls (historical data from 21 healthy volunteers taking 10 mg rosuvastatin). Rosuvastatin uptake by OATP-C-transfected Xenopus oocytes was also studied by use of radiolabeled rosuvastatin with and without cyclosporine. Results: In transplant recipients taking 10 mg rosuvastatin, geometric mean values and percent coefficient of variation for steady-state AUC(0-24) and Cmaxwere 284 ng \cdot h/mL (31.3%) and 48.7 ng/mL (47.2%), resp. In controls, these values were $40.1 \text{ ng} \cdot \text{h/mL}$ (39.4%) and 4.58 ng/mL(46.9%), resp. Compared with control values, AUC(0-24) and Cmax were increased 7.1-fold and 10.6-fold, resp., in transplant recipients. transplant recipients taking 20 mg rosuvastatin, these parameters increased less than dose-proportionally. Rosuvastatin had no effect on cyclosporine blood concns. The in vitro results demonstrate that rosuvastatin is a good substrate for OATP-C-mediated hepatic uptake (association constant, 8.5 \pm 1.1 μ mol/L) and that cyclosporine is an effective inhibitor of this process (50% inhibition constant, 2.2 \pm 0.4 μ mol/L when the rosuvastatin concentration was 5 μ mol/L). Conclusions: Rosuvastatin exposure was significantly increased in transplant recipients on an antirejection regimen including cyclosporine. Cyclosporine inhibition of OATP-C-mediated rosuvastatin hepatic uptake may be the mechanism of the drug-drug interaction. Coadministration of rosuvastatin with cyclosporine needs to be undertaken with caution.
- RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4

```
2004:515491 CAPLUS
ΑN
       141:54359
DN
       Process for the preparation of rosuvastatin
TI
       hemicalcium salt
IN
       Kumar, Yatendra; Meeran, Hashim Nizar Poovanathil Nagoor; De, Shantanu;
       Rafeeq, Mohammad; Sathyanarayana, Swargam
       Ranbaxy Laboratories Limited, India
PA
       PCT Int. Appl., 27 pp.
SO
       CODEN: PIXXD2
DT
       Patent
LA
       English
FAN.CNT 1
                                             DATE
                                                            APPLICATION NO.
       PATENT NO.
                                  KIND
                                                                                             DATE
                                  ____
                                            _____
                                                             ______
                                                                                              _____
                                  A1
       WO 2004052867
                                             20040624 WO 2002-IB5213
                                                                                             20021210
PΤ
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG
                  CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
       CA 2509619
                                   A1 20040624 CA 2002-2509619
                                                                                              20021210
       AU 2002348881
                                    Α1
                                             20040630
                                                              AU 2002-348881
                                                                                              20021210
       EP 1578733
                                    Α1
                                             20050928
                                                            EP 2002-781613
                                                                                              20021210
            R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                  IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
                                  Α
                                          20060301 CN 2002-830195
       CN 1742000
                                                                                              20021210
       HU 2005000851
                                    Α2
                                            20070828
                                                            HU 2005-851
                                                                                              20021210
       HU 2005000851
                                   А3
                                         20080228
       US 20060149065
                                   A1 20060706
                                                            US 2005-537859
                                                                                              20051109
PRAI WO 2002-IB5213
                                    W
                                             20021210
      CASREACT 141:54359
GΙ
```

ANSWER 78 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AB The present invention relates to a process for the preparation of rosuvastatin calcium, a promising new HMG-CoA reductase inhibitor. Thus, I was refluxed with the triphenylphosphanylidine hexanenitrile in toluene for 24 h to give the condensed product. The condensation product was dissolved in methanol and treated with methanesulfonic acid in water and stirred for 24 h at room temperature to give the cyanoketo alc. which was reduced using diethylmethoxyborane in THF, followed by sodium borohydride

to yield the cyanodiol. Concentrated HCl was added to the cyanodiol, and stirred for 12 h, and upon workup with calcium acetate gave rosuvastatin hemicalcium salt.

- L4 ANSWER 79 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2004:364075 CAPLUS
- DN 141:388103
- TI The effect of gemfibrozil on the pharmacokinetics of rosuvastatin
- AU Schneck, Dennis W.; Birmingham, Bruce K.; Zalikowski, Julie A.; Mitchell, Patrick D.; Wang, Yi; Martin, Paul D.; Lasseter, Kenneth C.; Brown, Colin D. A.; Windass, Amy S.; Raza, Ali
- CS AstraZeneca, Miami, FL, USA
- SO Clinical Pharmacology & Therapeutics (St. Louis, MO, United States) (2004), 75(5), 455-463
 CODEN: CLPTAT; ISSN: 0009-9236
- PB Elsevier Inc.
- DT Journal
- LA English
- Background: Coadministration of statins and gemfibrozil is associated with an AΒ increased risk for myopathy, which may be due in part to a pharmacokinetic interaction. Therefore the effect of gemfibrozil on rosuvastatin pharmacokinetics was assessed in healthy volunteers. Rosuvastatin has been shown to be a substrate for the human hepatic uptake transporter organic anion transporter 2 (OATP2). Inhibition of this transporter could increase plasma concns. of rosuvastatin. The effect of gemfibrozil on rosuvastatin uptake by cells expressing OATP2 was also examined Methods: In a randomized, double-blind, 2-period crossover trial, 20 healthy volunteers were given oral doses of gemfibrozil, 600 mg, or placebo twice daily for 7 days. On the fourth morning of each dosing period, a single oral dose of rosuvastatin, 80 mg, was coadministered. Plasma concns. of rosuvastatin, N-desmethyl rosuvastatin, and rosuvastatin-lactone were measured. In addition, the effect of gemfibrozil on the uptake of radiolabeled rosuvastatin by OATP2-transfected Xenopus oocytes was studied. Results: Gemfibrozil increased the rosuvastatin area under the plasma concentration-time curve from time 0 to the time of the last quantifiable

concentration [AUC(0-t)] 1.88-fold (90% confidence interval, 1.60-2.21) and the maximum observed rosuvastatin plasma concentration (Cmax) 2.21-fold (90% confidence interval, 1.81-2.69) compared with placebo. N-desmethyl rosuvastatin AUC(0-t) and Cmax decreased by 48% and 39%, resp. Pharmacokinetics of rosuvastatin-lactone was unchanged. The in vitro results indicate that the maximum gemfibrozil inhibition of rosuvastatin OATP2-mediated uptake was 50%; the inhibition constant for the inhibitory process was $4.0\pm1.3~\mu\text{mol/L}$. Conclusions. Gemfibrozil increased rosuvastatin plasma concns. approx. 2-fold, which is similar to the effect of gemfibrozil on pravastatin, simvastatin acid, and lovastatin acid plasma concns. and substantially less than the effect observed for cerivastatin. Gemfibrozil inhibition of OATP2-mediated rosuvastatin hepatic uptake may contribute to the mechanism of the drug-drug interaction. Care is warranted when gemfibrozil is coadministered with rosuvastatin and other statins.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 80 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:356390 CAPLUS

DN 141:88974

TI Development of an efficient, scalable, aldolase-catalyzed process for enantioselective synthesis of statin intermediates

AU Greenberg, William A.; Varvak, Alexander; Hanson, Sarah R.; Wong, Kelvin; Huang, Hongjun; Chen, Pei; Burk, Mark J.

CS Diversa Corporation, San Diego, CA, 92121, USA

SO Proceedings of the National Academy of Sciences of the United States of America (2004), 101(16), 5788-5793 CODEN: PNASA6; ISSN: 0027-8424

PB National Academy of Sciences

DT Journal

LA English

OS CASREACT 141:88974

GΙ

A process is reported for efficient, enantioselective production of AB key intermediates, e.g. hexanoic acid I, for the common chiral side chain of statin-type cholesterol-lowering drugs such as Lipitor (atorvastatin) and Crestor (rosuvastatin). The process features a one-pot tandem aldol reaction catalyzed by a deoxyribose-5-phosphate aldolase (DERA) to form a 6-carbon intermediate with installation of two stereogenic centers from 2-carbon starting materials. An improvement of almost 400-fold in volumetric productivity relative to the published enzymic reaction conditions has been achieved, resulting in a com. attractive process that has been run on up to a 100-g scale in a single batch at a rate of 30.6 g/L per h. Catalyst load has been improved by 10-fold as well, from 20 to 2.0 wt % DERA. These improvements were achieved by a combination of discovery from environmental DNA of DERAs with improved activity and reaction optimization to overcome substrate inhibition. The two stereogenic centers are set by DERA with enantiomeric excess at >99.9% and diastereomeric excess at 96.6%. In addition, down-stream chemical steps have been developed to convert the enzymic product efficiently to versatile intermediates applicable to preparation of atorvastatin and rosuvastatin.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 81 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2004:143119 CAPLUS
ΑN
DN
      140:187485
      Process for preparing the calcium salt of rosuvastatin
TI
IN
      Horbury, John; Taylor, Nigel Philip
PΑ
      Astrazeneca UK Limited, UK
SO
      PCT Int. Appl., 32 pp.
      CODEN: PIXXD2
      Patent
DT
LA
      English
FAN.CNT 1
                              KIND DATE
      PATENT NO.
                                                       APPLICATION NO.
                              ----
      WO 2004014872
                               A1 20040219 WO 2003-GB3463
                                                                                     20030807
PΙ
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
                CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
                LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
           RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, SA, SB, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                             A1 20040219 CA 2003-2495296 20030807
      CA 2495296
                               A1
      AU 2003251369
                                         20040225
                                                       AU 2003-251369
                                                                                       20030807
                                В2
                                         20070201
      AU 2003251369
                                        20050615
      EP 1539711
                                Α1
                                                      EP 2003-784274
                                                                                       20030807
           R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                           A 20050621 BR 2003-13394
      BR 2003013394
                                                                              20030807
     BR 2003013394 A 20050621 BR 2003-13394
CN 1688551 A 20051026 CN 2003-823994
JP 2006500347 T 20060105 JP 2004-527041
NZ 538070 A 20060831 NZ 2003-538070
RU 2326871 C2 20080620 RU 2005-102391
NO 2005000542 A 20050228 NO 2005-542
MX 2005PA01582 A 20050425 MX 2005-PA1582
US 20060116391 A1 20060601 US 2005-524235
ZA 200500745 A 20060329 ZA 2005-745
GB 2002-18781 A 20020813
WO 2003-GB3463 W 20030807
An improved process for manufacture of resuwastatin
                                                                                      20030807
                                                                                      20030807
                                                                                      20030807
                                                                                      20030807
                                                                                      20050209
                                                                                      20050818
                                                                                       20060110
PRAI GB 2002-18781
AΒ
      An improved process for manufacture of rosuvastatin
      calcium, useful for the production of a pharmaceutical for treatment of, inter
      alia, hypercholesterolemia, hyperlipoproteinemia and atherosclerosis, is
      described. For example, rosuvastatin methylamine salt was mixed
      with 2M NaOH (0.93 equiv) and water to give a concentration of the sodium salt
      0.2M. Aliquots of the stock solns. were taken and the calcium salt
precipitated
      by dropwise addition of a solution of CaCl2 (0.6 mol eq of a 0.7M aqueous
solution)
      under the conditions of temperature of 40^{\circ}, holding time of 30 min, and
      agitation rate of 550 rpm, to give rosuvastatin calcium in a
      yield of 64.6%.
```

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 82 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2003:985727 CAPLUS
- DN 140:12444
- TI Absolute oral bioavailability of rosuvastatin in healthy white adult male volunteers
- AU Martin, Paul D.; Warwick, Mike J.; Dane, Aaron L.; Brindley, Charlie; Short, Tracy
- CS AstraZeneca, Macclesfield, Cheshire, UK
- SO Clinical Therapeutics (2003), 25(10), 2553-2563 CODEN: CLTHDG; ISSN: 0149-2918
- PB Excerpta Medica, Inc.
- DT Journal
- LA English
- AB Rosuvastatin is a 3-hydroxy-3-methylglutaryl CoA-reductase inhibitor developed for the treatment of dyslipidemia. The results of clin. trials suggest that it is effective and well tolerated. The goals of this study were to determine the absolute bioavailability of an oral dose of rosuvastatin and to describe the i.v. pharmacokinetics of rosuvastatin in healthy volunteers. This was a randomized, open-label, 2-way crossover study consisting of 2 trial days separated by a ≥7-day washout period. Healthy male adult volunteers were given a single oral dose of rosuvastatin 40 mg on one trial day and an i.v. infusion of rosuvastatin 8 mg over 4 h on the other. Pharmacokinetic and tolerability assessments were conducted up to 96 h after dosing. A 3-compartment pharmacokinetic model was fitted to the plasma concentration-time profiles obtained for each volunteer after i.v. dosing.

Ten white male volunteers entered and completed the trial. Their mean age was 35.7 yr (range, 21-51 yr), their mean height was 177 cm (range, 169-182 cm), and their mean body weight was 77.6 kg (range, 68-85 kg). The absolute oral bioavailability of rosuvastatin was estimated to be 20.1%, and the hepatic extraction ratio was estimated to be 0.63. The mean volume of distribution at steady state was 134 L. Renal clearance accounted for .apprx.28% of total plasma clearance (48.9 L/h). Single oral and i.v. doses of rosuvastatin were well tolerated in this small number of healthy male volunteers. The absolute oral bioavailability of rosuvastatin in these 10 healthy volunteers was .apprx.20%, and absorption was estimated to be 50%. The volume of distribution at steady state was consistent with extensive distribution of rosuvastatin to the tissues. The modest absolute oral bioavailability and high hepatic extraction

of rosuvastatin are consistent with first-pass uptake into the liver after oral dosing. Rosuvastatin was cleared by both renal and nonrenal routes; tubular secretion was the predominant renal process.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 83 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
    2003:931341 CAPLUS
ΑN
DN
    139:395947
    Process for the preparation of rosuvastatin
TI
IN
    Kumar, Yatendra; De, Shantanu; Rafeeq, Mohammad; Meeran, Hashim Nizar
    Poovanathil Nagoor; Sathyanarayana, Swargam
PA
    Ranbaxy Laboratories Limited, India
    PCT Int. Appl., 31 pp.
SO
    CODEN: PIXXD2
DT
    Patent
    English
LA
FAN.CNT 1
                     KIND DATE APPLICATION NO.
    PATENT NO.
                                                            DATE
    _____
                      ____
                                        _____
    WO 2003097614
                      A2 20031127
                                       WO 2003-IB1946
                                                             20030521
PΙ
                      A3 20040521
    WO 2003097614
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
        KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                      Α
                                      IN 2002-DE575
                                                           20020521
    IN 2002DE00575
                           20040228
    AU 2003228010
                       A1
                             20031202
                                        AU 2003-228010
                                                              20030521
    BR 2003011195
                       Α
                             20050222
                                       BR 2003-11195
                                                              20030521
                             20051019
                                      EP 2003-725478
    EP 1585736
                       Α2
                                                              20030521
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
    IN 2004DN03803
                            20071130 IN 2004-DN3803
                      Α
                                                              20041201
    US 20050222415
                       Α1
                             20051006
                                        US 2005-515361
                                                              20050425
PRAI IN 2002-DE575
                       Α
                             20020521
    WO 2003-IB1946
                      W
                             20030521
    The present invention relates to a cost effective and industrially
```

advantageous process for the preparation of 4-4-(fluorophenyl)-6isopropyl-2-(N-methyl-N-methylsulfonylamino)-5-pyrimidinecarboxaldehyde as
intermediate for the preparation of rosuvastatin.

```
ANSWER 84 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
L4
      2003:837098 CAPLUS
ΑN
DN
      139:337984
      Preparation of rosuvastatin and related HMG-CoA reductase inhibitors via a
TI
      common chiral intermediate
IN
      Lim, Kwang-Min
PA
      CLS Laboratories, Inc., S. Korea
      PCT Int. Appl., 26 pp.
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
      PATENT NO.
                              KIND
                                                      APPLICATION NO.
                                        DATE
                               ____
                                                       _____
                                        20031023
                                                      WO 2003-KR707
      WO 2003087112
                               A1
                                                                                    20030409
PΤ
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
                CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
                GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH,
           RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
      KR 2003080620
                                Α
                                        20031017 KR 2002-19340
                                                                              20020409
      AU 2003219592
                                Α1
                                        20031027
                                                       AU 2003-219592
                                                                                    20030409
PRAI KR 2002-19340
                                        20020409
                                Α
      WO 2003-KR707
                                W
                                        20030409
      CASREACT 139:337984; MARPAT 139:337984
OS
GΙ
```

AB A process for the preparation of rosuvastatin and related HMG-CoA reductase inhibitors via the common chiral intermediate I [X = P(=0)R12, S(0)R1; R1 = H, alkyl, aryl; P = OH protecting group, e.g., t-butyldimethylsilyl] was disclosed. For example, condensation of Et tert-Bu (3R)-3-hydroxyglutaric acid, e.g., prepared from diethyl-3-hydroxyglutaric acid in 3-steps, and the sodium salt of di-Me methylphosphonate afforded claimed chiral phosphonate II in 77% yield and 99.1% chiral purity. Of note is the enantioselective esterase mediated hydroylsis of diethyl-3-hydroxyglutaric acid in 99.5% chiral purity. The preparation of the sodium salt of rosuvastatin using chiral phosphonate II was also provided. The present invention does not have the problem of removing reaction byproducts and the disposal of waste associated with current methodologies.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 85 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
T. 4
ΑN
     2002:946266 CAPLUS
     138:24717
DN
     Process for preparing chiral diol sulfones and dihydroxy acid HMG CoA
TI
     reductase inhibitors
ΙN
     Brodfuehrer, Paul R.; Sattelberg, Thomas R., Sr.; Kant, Joydeep; Qian,
     Bristol-Myers Squibb Company, USA
PA
SO
     PCT Int. Appl., 84 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                           KIND
                                   DATE
                                                 APPLICATION NO.
                                                                           DATE
                           ____
                                                 _____
                                   _____
                                                                           ______
     WO 2002098854
                            A2
                                    20021212
                                                 WO 2002-US17269
                                                                           20020530
PΤ
     WO 2002098854
                            АЗ
                                    20030327
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
              PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
              UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
              GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
              GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                                CA 2002-2449813
     CA 2449813
                                   20021212
                            Α1
                                                                           20020530
     AU 2002310261
                             Α1
                                   20021216
                                                 AU 2002-310261
                                                                           20020530
     US 20030018199
                                   20030123
                                                 US 2002-158355
                                                                           20020530
                             Α1
     US 6875867
                             В2
                                   20050405
     EP 1392656
                            Α2
                                   20040303
                                                 EP 2002-737324
                                                                           20020530
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     BR 2002009942
                             Α
                                   20040330
                                                 BR 2002-9942
                                                                           20020530
     TR 200400600
                             Т3
                                   20040621
                                                 TR 2004-600
                                                                           20020530
     JP 2004536813
                             Τ
                                   20041209
                                                 JP 2003-501843
                                                                           20020530
     HU 2004001724
                            Α2
                                   20041228
                                                 HU 2004-1724
                                                                           20020530
     CN 1656077
                             Α
                                   20050817
                                                 CN 2002-810927
                                                                           20020530
     TW 256391
                             В
                                   20060611
                                                 TW 2002-91111890
                                                                           20020603
     IN 2003DN01752
                             Α
                                   20051014
                                                 IN 2003-DN1752
                                                                           20031027
     MX 2003PA11195
                             Α
                                   20040318
                                                 MX 2003-PA11195
                                                                           20031204
     US 20050124641
                                                 US 2005-39702
                             Α1
                                   20050609
                                                                           20050120
PRAI US 2001-296403P
                            Ρ
                                   20010606
     US 2002-158355
                            А3
                                   20020530
     WO 2002-US17269
                             W
                                   20020530
     MARPAT 138:24717
OS
GΙ
      Me Me
                                            Me Me
                                                0
```

OR1

II

 R^2

or1

Ι

(un) substituted tetrazolyl, Ph, 2-benzoxazolyl, 2-benzothiazolyl; R1 = alkyl, cycloalkyl, aralkyl, Cbz; R2 = substituted tetrahydronaphthyl, pyrrolyl, pyrimidinyl, pyridinyl] were prepared as intermediates for HMG CoA inhibitors. Thus, the diol III was prepared as its arginine salt from the benzocycloheptapyridinecarboxaldehyde and the sulfone I [X1 = 1-phenyl-5-tetrazolylsulfonyl, R1 = CMe3], both of which were prepared in several steps.

- L4 ANSWER 86 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
- AN 2001:239443 CAPLUS
- DN 135:235642
- TI Preclinical and clinical pharmacology of rosuvastatin, a new 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitor
- AU McTaggart, F.; Buckett, L.; Davidson, R.; Holdgate, G.; McCormick, A.; Schneck, D.; Smith, G.; Warwick, M.
- CS AstraZeneca, Alderley Park, UK
- SO American Journal of Cardiology (2001), 87(5A), 28B-32B CODEN: AJCDAG; ISSN: 0002-9149
- PB Excerpta Medica, Inc.
- DT Journal; General Review
- LA English
- A review with 8 refs. Rosuvastatin (formerly known as ZD4522) is AΒ a new 3-hydroxy-3-methylglutaryl CoA (HMG-CoA) reductase inhibitor (statin) with distinct pharmacol. properties. Compared with most other statins, it is relatively hydrophilic, similar in this respect to pravastatin. Rosuvastatin has been shown to be a comparatively potent inhibitor of HMG-CoA reductase activity in a purified preparation of the catalytic domain of the human enzyme, as well as in rat and human hepatic microsomes. In rat hepatocytes, rosuvastatin had higher potency as an inhibitor of cholesterol synthesis than 5 other statins. Rosuvastatin was approx. 1000-fold more potent in rat hepatocytes than in rat fibroblasts. Further studies in rat hepatocytes demonstrated that rosuvastatin is taken up into these cells by a high-affinity active uptake process. Rosuvastatin was also taken up selectively into the liver after i.v. administration to rats. Potent and prolonged HMG-CoA reductase inhibitory activity has been demonstrated after oral administration to rats and dogs. Pharmacokinetic studies in humans given oral doses of 5-80 mg showed that maximum plasma concns. and areas under the concentration-time curve are approx. linear with dose. The terminal half-life is approx. 20 h. Studies with human hepatic microsomes and human hepatocytes have suggested little or no metabolism via the cytochrome P 450 3A4 isoenzyme. On the basis of these observations, it is suggested that rosuvastatin has the potential to exert a profound effect on atherogenic lipoproteins.
- RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> log y COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 265.38 265.59

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL ENTRY SESSION

CA SUBSCRIBER PRICE

-68.80 -68.80

STN INTERNATIONAL LOGOFF AT 03:51:59 ON 15 SEP 2008